FRANKLIN RIVER RAFTERS AND OTHER WESTERN TASMANIAN WILDERNESS PARKS USERS: THEIR CHARACTERISTICS, EXPERIENCES AND ATTITUDES AS INPUTS TO MANAGEMENT

by

BERNARD Gerard CARLINGTON B.Sc., M.E.Des.(E.S.)

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ABSTRACT

FRANKLIN RIVER RAFTERS AND OTHER WESTERN TASMANIAN WILDERNESS PARKS USERS: THEIR CHARACTERISTICS, EXPERIENCES AND ATTITUDES AS INPUTS TO MANAGEMENT

Tasmania's Franklin - Lower Gordon Wild Rivers National Park, together with the other Western Tasmanian Wilderness Parks, was entered onto the United Nations World Heritage List in 1982. Encompassing one of the largest south temperate wilderness areas in the world, these three contiguous parks provide opportunities for a range of recreation activities from vehicle-based sightseeing to extended wilderness white-water rafting.

Recreational pressures on all of the parks are increasing and they are now being seen, not only as reserves of major biological and ecological importance, but also as important components of an increasingly tourist based economy.

Both development within the parks to support recreational use and their general management have been intuitively based and until recently the acquisition of visitor data for planning purposes has been a very low priority. It is contended that, in the face of increasingly scarce resources and the need to provide a recreation environment that will allow maximum visitor satisfaction consistent with the conservation of the parks, the planning process must take due account of the nature of the recreation experience and the objectives of participants.

The purpose of this study is to provide management information for use in that process and the approach is based upon the premise that individuals choose to participate in recreation activities within selected physical, social, and managerial environments for the purpose of attaining pre-determined satisfactions or outcomes. It further presupposes that the focus of the management effort should be the provision of opportunities for the pursuit of such satisfactions. Successful management therefore requires an understanding of the satisfactions or outcomes that participants associate with the opportunities provided and the implementation of management prescriptions that contribute to the attainement of those satisfactions consistent with the overall policies of the agency.

The immediate objective of the study was to determine the use and user profiles of the wilderness parks with an emphasis on the newest, the Franklin - Lower Gordon Wild Rivers National Park; to determine the nature of the satisfactions associated by visitors with the opportunities afforded by the parks and with particular defined activity - setting complexes; to investigate the existence of differences between selected subgroups of rafters and their

responses to selected management options; and to examine the relationship between the satisfactions and valued outcomes of current participants and their views on appropriate management directions.

The research instrument selected was the self-administered questionnaire completed by a total of 1969 participants from all of the parks. A further 1028 participants completed a more lengthly form which included a section consisting of 62 attitudinal scales reflecting possible outcomes associated with participation. Of these 633 were rafters on the Franklin - Lower Gordon Wild Rivers.

Analysis undertaken on the basis of the park where contact was made revealed that, with the exception of the Franklin -Lower Gordon, the patterns of use and visitor characteristics were essentailly similar with the dominant use being vehicle-based, short-duration activities centred around the visitor service areas. Again with the same exception, the opportunities and outcomes associated with each of the parks were essentially similar with those satisfactions arising out of exposure to natural environments rating most highly followed by those arising from in-group social interaction and physical exercise. The Franklin - Lower Gordon Wild Rivers National Park differed in that outcomes associated with achievement and risk taking figured more prominently.

Six broadly defined activity settings were established on the basis of visit duration, activity, and maximum possible penetration into the parks. These were labelled: sightseeing, picnicking, daywalking, developed area camping, bushwalking and rafting. On the basis of participant scoring of the outcome scales, only three clearly distinguishable activity settings emerged, each with an identifiably different pattern of valued outcomes associated with it: rafting, bushwalking, and a single remaining group of activity setting complexes the locus of which is confined to the immediate proximity of the visitor service areas - the sightseeing, picnicking, daywalking, and developed area camping.

While managerial presence and policy are an integral part of the resultant setting, the links between the value placed by participants on the experience outcomes and their views on management direction are few and weak and do not provide any clear indication to management of any broadly shared perception that selected management directions would either enhance or detract from future availability of opportunities to pursue particular experiences.

Differences in outcome profiles occurred among subgroups of rafters with differences showing up between those in commercially organised parties and others; first time participants and those with previous expereience; and

between males and females. In terms of future management options, there was a clear perception on the part of rafters that controls on user numbers would be appropriate as would controls on other aspects of rafters' behavior including the use of fuel stoves, axes and saws. There was also a clear preference for such controls to be exercised prior to entry into the park.

Three indices of management presence and control were developed from participants' scoring of possible management prescriptions and the relationship between participants scores on these indices and their outcome scores examined. The results demonstrate again that outcome scores are not strong predictors of participant views on future management direction in this environment.

STATEMENT

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university and to the best of the author's knowledge and belief the thesis contains no copy or paraphrase of material previously published or written by other persons except when due reference is made in the text of the thesis.

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CHAPTER ONE

THE STRUGGLE TO PRESERVE TASMANIA'S WILDERNESS AND THE CHALLENGE OF ITS FUTURE MANAGEMENT

In December of 1982 the three Western Tasmanian Wilderness Parks (Cradle Mountain - Lake St. Clair, Franklin - Lower Gordon Wild Rivers, and Southwest) were added to the United Nations World Heritage List. Two of these national parks, the Southwest National Park and the Franklin - Lower Gordon Wild Rivers National Park, had been the focus of heated debate between those who supported wilderness preservation and those who favored development in Tasmania's South West (Figure 1.1).

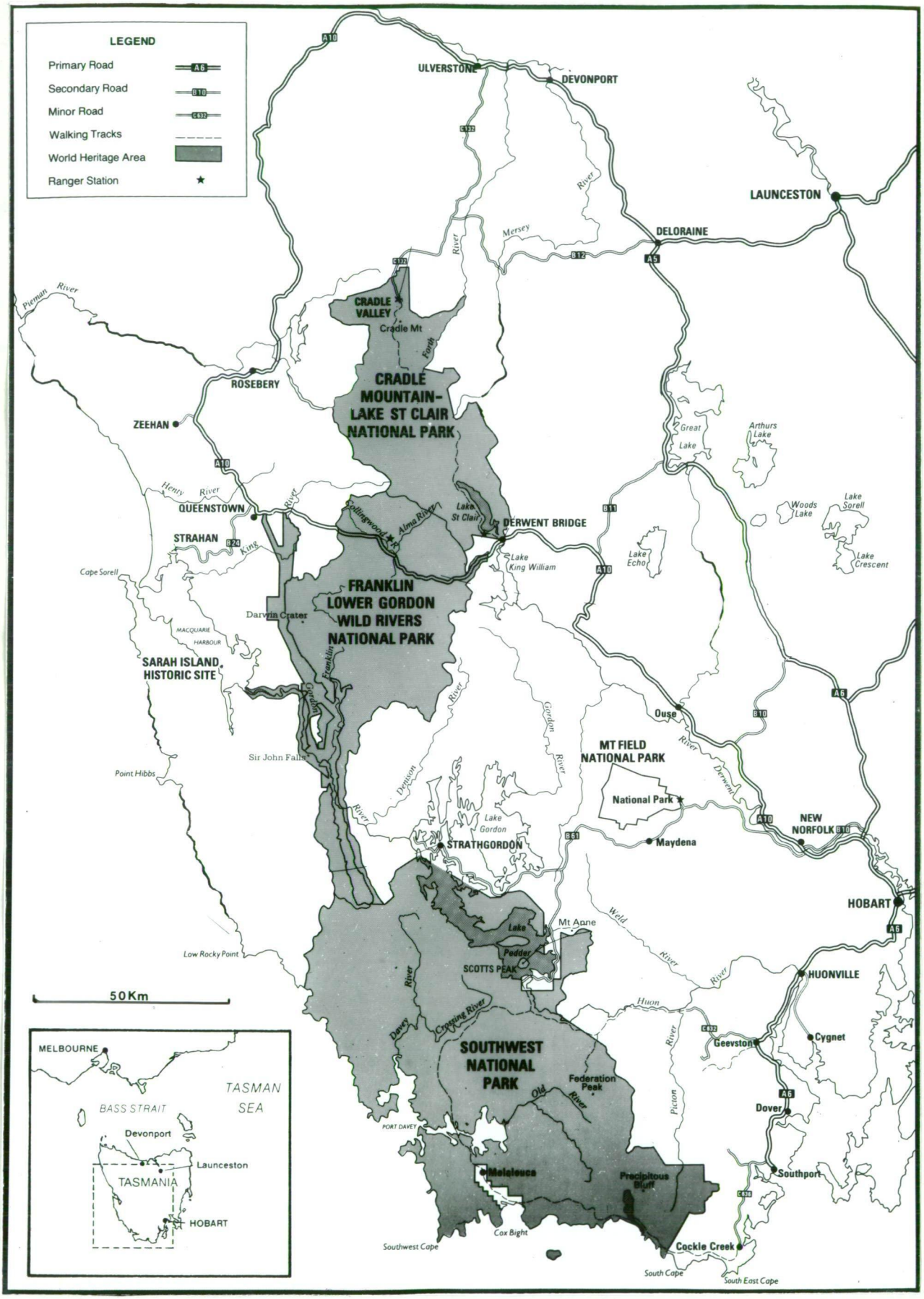
Described by Sir Edmund Hillary as one of the last great wilderness areas in the world (Burton et al. 1974), South West Tasmania is one of the most important and highly regarded primitive recreation destinations in Australia (Mosley 1970). With a roadless core of approximately 630 000 hectares surrounded by a 10 kilometre buffer zone (Russell et al. 1979), the South West is more than ten times the size of the next largest roadless wilderness in temperate Australia.

The region contains the only known breeding sites of one of the world's rarest parrots, the endangered Orange-bellied

FIGURE 1.1

LOCATION MAP OF SOUTH WEST TASMANIA AND

THE WESTERN WILDERNESS PARKS


LEGEND
Primary Road
Secondary Road
Minor Road
Walking Tracks
World Heritage Area
Ranger Station
ULVERSTONE
DEVONPORT
LAUNCESTON
DELORAINE
Mersey River
Forth River
Pieman River
CRADLE VALLEY
Cradle Mt
CRADLE MOUNTAIN-LAKE ST CLAIR NATIONAL PARK
ROSEBERY
ZEEHAN
Great Lake
Arthurs Lake
Woods Lake
Lake Sorell
Lake Crescent
Henty River
QUEENSTOWN
Collingwood River
Alma River
Lake St Clair
DERWENT BRIDGE
Lake King William
Lake Echo
STRAHAN
King River
Cape Sorell
FRANKLIN LOWER GORDON WILD RIVERS NATIONAL PARK
Darwin Crater
MACQUARIE HARBOUR
SARAH ISLAND HISTORIC SITE
Franklin River
Gordon River
Ouse
Derwent River
MT FIELD NATIONAL PARK
National Park
Sir John Falls
Point Hibbs
Denison River
Lake Gordon
STRATHGORDON
Maydena
NEW NORFOLK
HOBART
Lake Pedder
Mt Anne
Weld River
SCOTTS PEAK
Low Rocky Point
HUONVILLE
Huon River
Davey River
Crossing River
Geeveston
Cygnet
SOUTHWEST NATIONAL PARK
Federation Peak
Old River
Picton River
Dover
PORT DAVEY
Melaleuca
Precipitous Bluff
Southport
Cox Bight
Cockle Creek
Southwest Cape
South Cape
South East Cape
50Km
MELBOURNE
TASMAN SEA
BASS STRAIT
Devonport
Launceston
TASMANIA
HOBART

Parrot (Neophema chrysogaster), of which, by the early 80s, only 40 known breeding pairs remained (Brown & Wilson 1982). More than fifty rare, vulnerable or endangered plant species are found in the South West including the Huon Pine (Lagarostrobus franklinii) specimens of which, at up to 2000 years of age, are the oldest living things in Australia (Brown et al. 1977; Millington et al. 1979).

Recently discovered caves, less than 50 metres from the banks of the Franklin River, have yielded the earliest and most extensive archaeological evidence of humanity's southernmost habitation during the last Ice Age yet uncovered (Kiernan et al. 1983). Now recognised not only as a superb primitive recreation area but also as an area of immense botanical, ecological, zoological, and archaeological importance, the South West has become the focus in the cause of wilderness preservation in Australia.

The South West Committee (1966), one of the first organizations established to promote the development of conservation-based management policies for the region, summarized its importance in 1966 as follows:

> The South West is unique in Tasmania, and in Australia, by virture of its scenery, scientific interest and the extent of the area which is still in a primitive condition. Since the island <Tasmania> was first settled, the rugged terrain, isolation and infertility of the area have combined to preserve it as the largest single expanse of primitive non-arid land in temperate Australia. For this reason, and because of the distinctive character of its natural environments

> it is now the most valued area for hardy unconfined recreation in the nation and a scientific resource of international significance.

Almost twenty years later, the Chairman of the Australian Heritage Commission maintained that decisions regarding the future of the South West would be among the most important of the twentieth century in Australia (Wiltshire, Brisbane Courier Mail 4 January 1983).

I.1. The Preservation - Development Conflict:

For many years, the region's principal attraction was Lake Pedder with its three kilometre long, pink-white, quartzite beach that, in places, was 500 metres wide. First discovered by non-aborigines in 1835, this small (1000 hectare) shallow, elevated lake became popular during the 1940s as a base camp area for extended wilderness treks. Situated in the Serpentine Valley bounded by the Frankland and Sentinel Ranges, the highly acid and dark tea-coloured waters of the lake produced a striking mirror image of the sky and surrounding mountains. The attractiveness of the area and its popularity with bushwalkers led the Hobart Walking Club to propose that it be made a national park and, in 1955, the Tasmanian State Government created the 23 500 hectare Lake Pedder National Park. The growing popularity of the region for dispersed, self-sufficient recreation and recognition of its biological importance led to the enlargement of the park to 189 000 hectares in 1968 when it

became known as the Southwest National Park.

Concurrent with moves to preserve the Lake Pedder area as the central feature of a national park, Tasmania's electricity authority, the Hydro Electric Commission (HEC), was carrying out detailed studies of the Lake Pedder area's potential for hydro-electric development. In 1964, construction of the first access road into the area was begun and, while no plans had been made public, there was widespread concern over possible impacts on the lake as a result of HEC activities. In 1965, a statement was issued by the Premier of Tasmania to the effect that proposed hydro works would entail 'some modification of Lake Pedder National Park' (Hobart Mercury 21 June 1965). Details of the proposed scheme were finally released in 1967 and, in spite of large-scale public protest, the Tasmanian State Parliament passed legislation allowing construction to proceed on 24 August 1967.

The campaign protesting the flooding of Lake Pedder was conducted at state, federal, and international levels and a Committee of Inquiry was eventually established by the Commonwealth Government to examine the entire issue in February 1973. Upon the recommendation of this Committee, the Commonwealth offered to fund a moratorium on further flooding to allow study of alternative project configurations which still might have avoided the inundation of Lake Pedder. This offer was immediately rejected by the

Tasmanian State Government and, as national parks in Australian states are under state jurisdiction, the Commonwealth Government was powerless to intervene further. Where the original Lake Pedder once had a surface area of 1000 hectares, the new Lake Pedder and Lake Gordon impoundments have a combined surface area of 52 000 hectares - more than twice the size of the original national park.

With the destruction of Lake Pedder described in an International Union for the Conservation of Nature publication as 'the greatest ecological tragedy since European settlement' (Luther & Rzoska 1971) the campaign to prevent its inundation was long and acrimonious. Lake Pedder, the South West, and Tasmania were in the public eye for several years and numerous books, magazines, and papers were published throughout Australia promoting the conservation cause. For the first time, Australian conservationists attempted to use an issue of this nature to influence the outcome of political campaigns at both the state and federal levels and, according to Bowman (1979) and Davis (1981), it was during this period that the Australian conservation movement came of age politically.

The significance of the Lake Pedder campaign to Australians has been compared to the significance of the damming of the Tuolomne in Hetch Hetchy Valley of Yosemite in the early 1900s for the US conservation movement (Helman 1981). During the 1970s, the enactment of environmental legislation

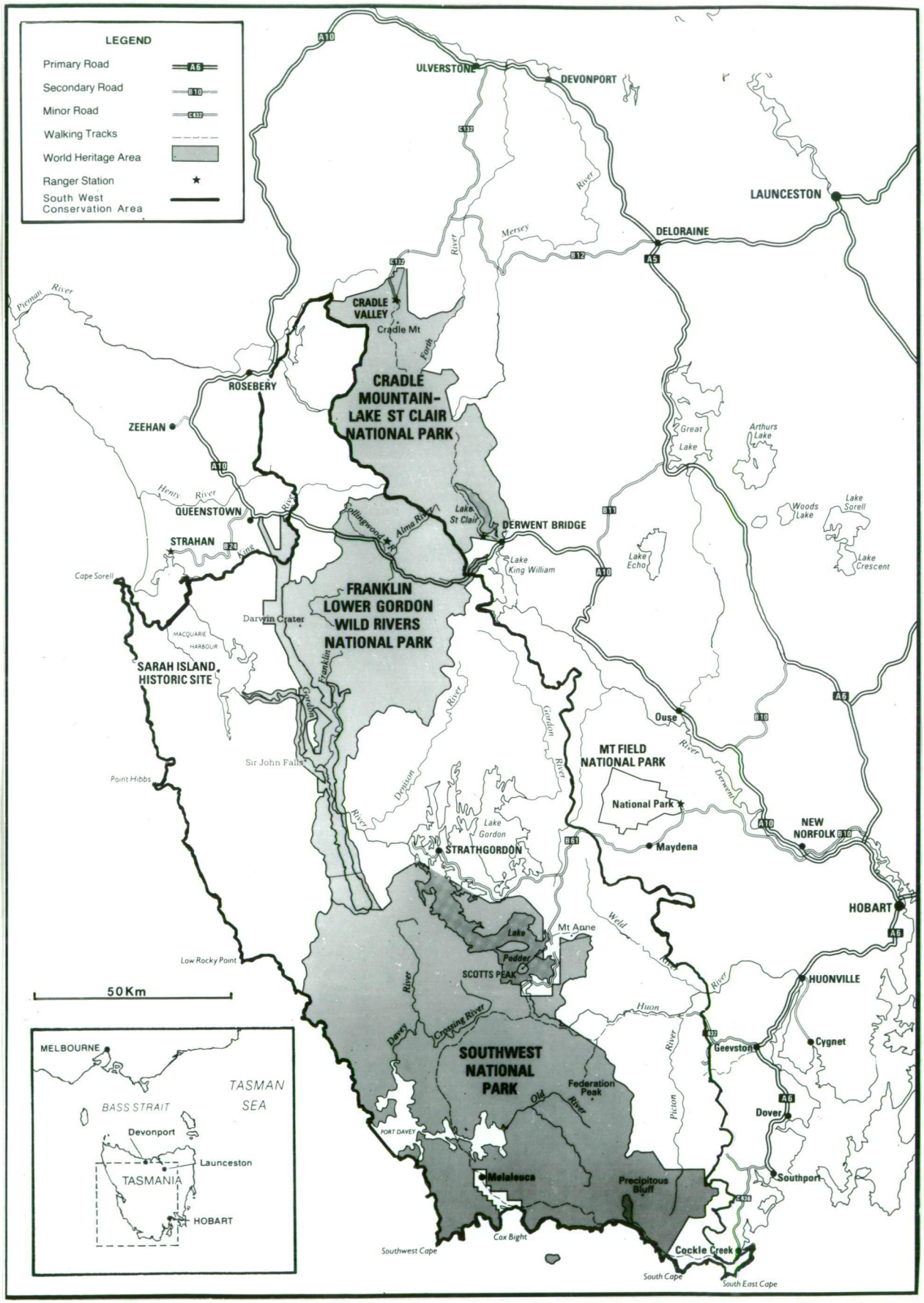
in Australia, particularly with respect to impact assessment and conservation of the national estate, was strongly influenced by the depth of public feeling and awareness aroused by the Lake Pedder controversy (Mosley, Australian Conservation Foundation Newsletter March 1983). In Tasmania, it led to the establishment of a Select Committee of the Tasmanian Legislative Council, the Upper House of the State Parliament, which recommended the formation of the Tasmanian National Parks and Wildlife Service.

At this time, the Commonwealth Government offered to assist Tasmania in establishing a world standard national park in the South West, and the Tasmanian National Parks and Wildlife Service made application to the Commonwealth for funding to undertake a resource survey of the South West. After the Commonwealth States Grants (Nature Conservation) Act 1974 was amended to allow for the funding of such research, the Commonwealth Government provided the funding for the South West Tasmania Resources Survey - the largest integrated resources survey ever undertaken in Australia. The Southwest National Park was enlarged to 403 240 hectares in 1976 (and subsequently to 442 240 ha in 1981) and the remainder of the region, the boundaries of which were first set by the Cartland Committee (Cartland et al. 1978), declared the Southwest Conservation Area (Figure 1.2). While this status gave legal protection to the region's wildlife, it did not prejudice future forestry, mining, or mineral operations nor did it preclude further hydro

FIGURE 1.2

THE SOUTHWEST CONSERVATION AREA AND

THE WESTERN WILDERNESS PARKS


LEGEND
Primary Road
Secondary Road
Minor Road
Walking Tracks
World Heritage Area
Ranger Station
South West Conservation Area
ULVERSTONE
DEVONPORT
LAUNCESTON
DELORAINE
CRADLE VALLEY
Cradle Mt
CRADLE MOUNTAIN-LAKE ST CLAIR NATIONAL PARK
ROSEBERY
ZEEHAN
QUEENSTOWN
STRAHAN
DERWENT BRIDGE
Lake St Clair
Lake King William
Lake Echo
Great Lake
Arthurs Lake
Woods Lake
Lake Sorell
Lake Crescent
FRANKLIN LOWER GORDON WILD RIVERS NATIONAL PARK
Darwin Crater
SARAH ISLAND HISTORIC SITE
Sir John Falls
Point Hibbs
Cape Sorell
MT FIELD NATIONAL PARK
National Park
Ouse
Maydena
NEW NORFOLK
HOBART
STRATHGORDON
Lake Gordon
Lake Pedder
Mt Anne
SCOTTS PEAK
Low Rocky Point
HUONVILLE
Geeveston
Cygnet
Dover
Southport
SOUTHWEST NATIONAL PARK
Federation Peak
PORT DAVEY
Melaleuca
Precipitous Bluff
Cox Bight
Southwest Cape
Cockle Creek
South Cape
South East Cape
50Km
MELBOURNE
BASS STRAIT
TASMAN SEA
Devonport
Launceston
TASMANIA
HOBART

development.

In 1979, the Tasmanian National Parks and Wildlife Service (NPWS) proposed the creation of a wild rivers national park in the South West to protect the Franklin and Lower Gordon Rivers. The TNPWS maintained that the rivers were an integral part of the South West Wilderness and a major feature of the South West Conservation Area with no other national park in Tasmania or Australia having a natural waterway comparable to the Franklin in terms of its recreational, scenic, historical, tourist, or scientific value (National Parks and Wildlife Service 1979). The Hydro Electric Commission also released a proposal in 1979 calling for the construction of a dam on the Lower Gordon below its junction with the Franklin thus setting the scene for another confrontation (Hydro Electric Commission 1979). Little known and virtually unexplored until the late 1950s when both it and the Gordon were first successfully canoed, the Franklin was to become Australia's most publicised river.

The Tasmanian Government decided to proceed with an alternative hydro electric scheme involving a dam on the Gordon River above its junction with the Olga River. This scheme, though less cost effective, avoided any flooding of the Franklin and, in 1981, the Franklin - Lower Gordon Wild Rivers National Park was formally declared. Encompassing the watershed of the Franklin River and the Gordon River

below the Olga River, it occupies some 195 000 hectares of rugged wilderness and near wilderness in the South West. The fourth largest river in Tasmania and the last major undammed river system, the Franklin has a mean annual flow of 3500 cusecs and passes through some of the state's most spectacular terrain as it drops some 1400 metres from its source in the Cheyne Range to where it joins the Lower Gordon some 125 kilometres downstream. Along its course, it passes beneath the 1433 metre quartzite massif of Frenchmans Cap and through the Irenabyss, a 100 metre deep ravine, whose walls at their narrowest are less than five metres apart. The Franklin also passes through Tasmania's deepest gorge, the ten kilometre long Great Ravine, the sides of which rise to 500 metres above the river.

The then Premier of Tasmania, Mr Doug Lowe, supported the conservation of the Franklin - Lower Gordon and, under his government, the preliminary steps were taken to have three Tasmanian parks including the Southwest National Park and the Franklin - Lower Gordon Wild Rivers National Park placed among Australia's nominations for World Heritage Listing. These moves were resisted by those who favored further hydro development in the South West in the form recommended by the Hydro Electric Commission and Mr Lowe was subsequently removed from the leadership of the government by his party colleagues and consequently left the Labor Party to sit in Parliament as an independent. Lowe was accompanied by another Government Member, leaving the Tasmanian Labor Party

without a majority in Parliament and an election was forced on 15 May 1982. The strongly pro-dam Liberal Party won this election and immediately passed legislation authorising the construction of the hydro scheme as proposed by the Hydro Electric Commission. At the same time, the Government revoked 14 000 hectares of the Wild Rivers National Park and vested control of this area in the HEC.

The response of the conservation movement to the proposed dam was immediate and massive. A campaign to mobilise public opinion and sentiment behind the preservation of the Franklin as a wilderness was mounted in Australia and internationally. The effectiveness of the national campaign was demonstrated during the Commonwealth by-election for the seat of Flinders, in the mainland state of Victoria, when an estimated 41 percent of voters wrote 'No Dams' on their ballot papers (O'Neill, Melbourne Age 6 December 1982). The scientific and academic communities also came out strongly against the dam with the 15th Pacific Science Congress, attended by over 1700 scientists from Pacific rim countries, passing a resolution urging the Tasmanian Government to declare a moratorium on hydro development as the benefits to be gained by such development were far outweighed by the 'universal and permanent values of an area unique in a botanical, ecological, paleoclimatic and archaeological sense.' (Hobart Mercury 12 January 1983).

As part of its campaign to halt the proposed damming of the

Franklin - Gordon Rivers, the Tasmanian Wilderness Society organized street marches in major mainland urban centres and a programme of non-violent blockade of river and road access to work sites. The public response was unprecedented. The final major demonstration of 4 March 1983 was the largest ever held in Hobart, the Capital of Tasmania, surpassing even those held during the Vietnam era (Bailey, Hobart Mercury 5 August 1983). The blockade drew volunteers from all over Australia and overseas and, as of March 1983, more than 1100 individuals, including a former Minister for National Parks, had been arrested for alleged trespass and obstructing access to that part of the World Heritage Area controlled by the HEC.

The Commonwealth Government, in light of the weight of public opinion against dam construction, resisted requests from the new Tasmanian State Government to withdraw the Franklin - Lower Gordon nomination for World Heritage status and, on 14 December 1982, the area was formally accepted by the World Heritage Committee and included on the United Nations World Heritage List. Simultaneous with its listing came the suggestion by Professor Ralph Slatyer, Chairman of the World Heritage Committee, that Australia request that the area be placed on the World Heritage Endangered List due to the threat posed by the planned dam (Slatyer, Canberra Times 8 January 1983). The Commonwealth Government then made an offer of $500 million compensation to the State Government as inducement to abandon the dam project. This

offer was rejected and, as the Commonwealth Government decided against further action, construction work on access roads, jetties, and landings proceeded.

A federal election was called for 5 March 1983 and the leader of the Australian Labor Party, Mr Bob Hawke, announced that, if elected, it would be the policy of the Labor Government to force a halt to dam construction on the Franklin - Lower Gordon. The Labor Party won the election and the new Government immediately proclaimed new regulations under Section 69 of the 1975 National Parks and Wildlife Conservation Act forbidding construction of such works. The Government then introduced and passed the World Heritage Properties Conservation Act 1983 to further strengthen the protection of the area.

The Tasmanian State Government refused to acknowledge Commonwealth jurisdiction in this issue and, while work continued, a challenge to the constitutional validity of the Act and the regulations was mounted in the High Court of Australia. On 1 July 1983, the High Court found in favor of the Commonwealth Government (Commonwealth vs Tasmania 46 ALR 625). Work on the Franklin - Lower Gordon dam project was halted and the Commonwealth pledged compensation so that Tasmania would not be economically disadvantaged by the project's abandonment.

I.2. The Rise of the South West as a Recreation Destination:

During the last two decades, while the debate over the future of the South West continued between conservationists and those who favored hydro-electric development, the popularity, reputation and use of the region as a primitive recreation destination grew. This growth in popularity has not been matched by increased management or research efforts and use of the South West has remained largely uncontrolled and unmonitored. The result of this is that now, with the popularity of wilderness pursuits growing rapidly and visitation quickly expanding, very little is known about the volume or nature of the recreational use of the area or the means through which such growth can be managed.

Even after the drowning of Lake Pedder and the focusing of national attention on the South West, there were no manned stations established and few logbooks installed in the park. Tasmania, the smallest Australian state, has a population of under a half million people and the annual budget of the National Parks and Wildlife Service is correspondingly small. Until 1983-84, the total ranger staff complement for the South West was three - all stationed outside the region.

Few figures are available on the recreational use of the South West. An exception to this is the road to the Lake Pedder and Lake Gordon impoundments where vehicle counts have been maintained since the road's opening. This access

has encouraged mass use and estimates based on vehicle counts indicate that approximately 60 000 visitors have arrived at Lake Pedder annually since 1975. The triennial tourism survey revealed that more than 18 percent of all visitors to Tasmania included this area on their itinerary in 1981 (Tasmanian Department of Tourism 1982). Three years later, in the face of an overall decline in tourist numbers of around ten percent, the hydro impoundments remain popular but their share of the market has declined to the extent that in 1984 only 15.4% of adult visitors include the lakes on their itinerary (Tasmanian Department of Tourism 1985). While popular, visitor use is highly concentrated around the impoundments and associated hydro works with little penetration beyond their immediate vicinity.

While visitation to the developed area within the Southwest National Park has been relatively static or showing a decline, use of the more remote areas is apparently increasing. There are three major walking tracks in the South West: the South Coast Track to Port Davey, the Huon Track with its spurs to the Arthur Range and Federation Peak, and the Frenchmans Cap Track. The figures for their use are intermittent and very conservative as many walkers do not complete a logbook entry and ranger patrols are very infrequent. Nevertheless, they do indicate a general trend.

A logbook installed in 1974 at Federation Peak, a three to

four day walk from the nearest road access, shows an annual increase in visitation of some 36% to 1980. Estimates of the South Coast Track usage since 1961-62 show an annual growth rate in visitation of some 31% to 1977 when summary figures were last compiled. A count of walkers encountered during a 12 day trip in the summer of 1982 yielded a total of 240 people - an average of 20 encounters per day. Prior to its inclusion in the Franklin - Lower Gordon Wild Rivers National Park, Frenchmans Cap was within a small (13 000 ha) national park proclaimed in 1941. A logbook was installed at the summit of the Cap in 1975 and, in the five years until its removal in 1980, registrations increased by 120%. These growth rates are considerably higher than have occurred in less remote parks in the state and Kirkpatrick (1979) believes the high rates of growth in the more remote areas are a result of both increasing popularity and the displacement of isolation seekers by mass use.

It was during the late 1960s and 1970s that recreational use of the Franklin - Gordon Rivers began to grow. They were successfully canoed for the first time in 1958 and began to attract both rafters and canoeists looking for white water wilderness recreation. Large numbers of less active tourists also began visiting, attracted to the edges of the wilderness area by its magnificent scenery. One of the most popular means of visiting the edge of this wilderness region, while travelling in comfort, is aboard commercially operated day cruises which travel from the town of Strahan

up the lower reaches of the Gordon River. In 1977/78 an estimated 30 000 visitors went on these cruises (Waterman 1978). In 1981/82 more than 70 000 of the visitors to Tasmania (23.5%) included a Gordon River cruise in their visit, making the Franklin - Lower Gordon one of the State's most important tourist destinations (Tasmanian Department of Tourism 1982). While there was a downturn in total visitor numbers to the state in 1984, visitor numbers for the Gordon River increased in absolute terms and increased in percentage terms to be included in the itineraries of 26.8% of all visitors to Tasmania (Tasmanian Department of Tourism 1985). The total number of rafters making the long (10-12 day) and often hazardous trip down the length of the Franklin - Lower Gordon is much lower but was doubling annually in the period between 1978 and 1983.

The appeal of the South West for those seeking exposure to a wilderness environment has stimulated efforts by the private sector to provide a range of excursion packages suited to varying consumer tastes and degrees of physical fitness. In addition to Lower Gordon River cruises, commercial rafting tours now operate on the length of the Franklin - Lower Gordon. Charters are available for cruising the more remote Port Davey by motor launch or aboard a square rigged brigantine which visits the area annually. Extended walking tours are offered for the South Coast Track as well as shorter walks from temporary base camps established at Port Davey. Guided, four-wheel drive tours operate on the fringe

of the South West where limited road access exists and scenic flights over the region are offered on a regularly scheduled basis. All of these commercial ventures are relatively recent developments and all are expanding to meet growing demand. The proportion of overall South West visitation accounted for by commercial operations is not known; however, on the Franklin - Lower Gordon, commercial rafting tours accounted for an estimated 40% of total visitor days in 1982-83, up from 23% the previous year.

I.3. The Management Challenge:

The importance of Tasmania's South West in providing an area for primitive recreation appears destined to grow. Its exposure nationally will continue to attract increasing numbers of wilderness seekers who can no longer find such areas on the Australian mainland. With the inclusion of the Western Tasmanian Wilderness Parks on the World Heritage List, the South West has been recognised as the equal of the Great Barrier Reef and Ayers Rock.

In addition to the rapidly growing number of visitors who come to the South West, many more are exposed to its grandeur through the ever increasing number of large format books, posters, prints and wilderness calendars distributed throughout Australia each year. Prior to the Lake Pedder conflict, the South West was known to very few. As a deliberate part of the conservationists' strategy during the

conflict, public interest and support were generated through photographic slide shows and the production and distribution of lavishly illustrated books, posters and pamphlets depicting the magnificent scenery of Lake Pedder and the South West (Angus 1975; Lake Pedder Action Committee 1972, 1973; Stephens (undated)). Although the campaign was finally lost, thousands of Australians were introduced to the region through these photographs. During the struggle to save the Franklin - Lower Gordon, this process was repeated on a larger scale and was strongly supplemented by the producers of large format books who discovered a considerable market for wilderness pictorials that focused on Tasmanian's South West (Brown 1979; Brown & Dombrovskis 1983; Gee 1978; Hawes 1982; McLeod & Howes 1983; Moult & Meier 1983; Sanders & Bell 1980; Southwell 1983).

The struggle itself has also become the subject of several books (Connolly 1983; Tindale & Waud 1983; McQueen 1983; Green 1984). It has been the subject of numerous films, one of which, Tasmania: The Last Wilderness (Jensen 1983), having been successfully shown at both the Cannes and New York Film Festivals, has been marketed internationally for television while another, Hawkin's River (Hazellwood 1983), is under distribution by Twentieth Century Fox. Perhaps more significantly, Tasmania's South West was selected as the case study used to examine wilderness issues in an environment, law and society text published by the Curriculum Development Centre, a federal statutory body, and

the New South Wales Law Foundation for use in Australian high schools (High School Education Law Project 1979). Such continued exposure can only contribute to increased use and visitor pressure.

This growing importance and popularity will constitute a continuing challenge to the South West as a wilderness area. The Tasmanian National Parks and Wildlife Service has concentrated, since its inception in 1970, on the acquisition of significant natural areas and historic sites, and on the physical management of the state's parks and wildlife. Efforts directed at understanding and managing users have been minor. Where visitor pressure has resulted in obvious physical deterioration, the response has been to physically harden sites and upgrade facilities, whenever possible, to withstand greater use. The closure of sites or trails and limitation of visitor numbers have not been considered justified. This type of response has led to an increasing level of development in more popular areas. Such a policy, if applied to the South West, would inevitably result in the deterioration of the very qualities which make this wilderness so attractive to those seeking primitive environments.

The growing activities of commercial interests, rapidly expanding visitor numbers, and calls for increased tourist development and unbridled expansion of commercial tourist ventures make the need for a sound management plan for the

Western Wilderness Parks particularly pressing. In spite of the wealth of physical data provided by the South West Tasmania Resources Survey, none of the wilderness parks has an approved management plan. Moreover, the paucity of both quantitative and qualitative visitor information makes the task of formulating such a plan a difficult one.

Beyond gross estimates, the Tasmanian National Parks and Wildlife Service (TNPWS) has virtually no reliable data on park usage in the South West. The general deficiencies in both qualitative and quantitative data on park usage within Tasmania as well as inadequate planning resources within the TNPWS were pointed out by consultants in 1977 (Peat, Marwick, Mitchell & Co. & Evers 1977). In 1984, consultants hired to advise the Tasmanian Government again pointed out that data, essential to the planning process, regarding the level and nature of recreational use of the parks and of the South West Conservation Area, are simply not available and that the resources allocated for the planning and management of the region fall far short of the minimum required (Evers et al. 1984).

Nowhere is the need for the development of a management plan more pressing than for the Franklin - Lower Gordon Wild Rivers National Park. No other area has seen such dramatic growth in visitation. In a remarkably short span of time the Franklin River changed from a little-known river visited only by a few hardy adventurers to the central feature of

Tasmania's Wild Rivers National Park; it became the focus of a conservation campaign which ended in legal battle between the Commonwealth Government and the State of Tasmania decided in the High Court of Australia; it was accepted for inclusion on the United Nations World Heritage List; and it became Australia's most publicised and well known river.

Until very recently, the Franklin and the surrounding wilderness was essentially unmanaged. Visitation was characteristically low and the region's rugged landscape discouraged all but the most dedicated. With the growing popularity of wilderness pursuits, rising visitor numbers and Tasmania's more aggressive marketing of its 'natural' image, many more sightseers, walkers, campers and rafters are coming to the region and the need for the development of appropriate planning and management strategies for the state's wilderness areas has become obvious.

The Franklin - Lower Gordon is a milestone in that it is the first Australian national park proclaimed specifically to preserve, intact, a major river system. In spite of Australia's arid nature, the conservation of its riverine systems has been given little attention in the past (Hope et al. 1974; Lake 1978, 1979). In particular, the recognition of the importance of the recreational values of wild and scenic rivers has been a recent phenomenon and relatively few studies have been carried out in this area (Helman 1979, 1980, 1981). Limited research has been undertaken into

wilderness use and users in Australia (Bardwell 1973; Foster 1975; McKenry 1975), but little has been done to examine the use and users of wild rivers as a subset of wilderness recreation. As a result, there is little Australian experience in the management of either wilderness or wild rivers for the Tasmanian National Parks and Wildlife Service (TNPWS) to draw upon in its attempt to formulate appropriate management strategies and programmes for the Franklin - Lower Gordon.

The rapid growth in popularity of the Franklin for rafting and the shift in user group from a small number of generally experienced aficionados to large numbers of novices presents a major challenge to the TNPWS. The narrow river corridor offers few potential campsites in certain sections and these sites are subjected to concentrated use. Firewood is scarce in some locations and standing trees are being damaged. Campfires also pose a potential threat due to the peaty nature of the area's soils. Access, though open and uncontrolled, is normally gained by launching on the Franklin's first major tributary, the Collingwood River, at the point where the Lyell Highway bridge spans it. This area is heavily congested during the peak season as parties attempt to launch from the very small suitable launching area.

The importance of the Franklin - Lower Gordon as a

wilderness area and peoples' perception of it as such, the rapidly growing visitor volumes and the nature of the river corridor make the sensitive and effective management of people a more important aspect of the management of this park than it is in any other park in Tasmania.

I.4. A User Based Approach to Meeting the Management Challenge:

The planning and management of the Franklin - Lower Gordon Wild Rivers National Park or any other natural area for outdoor recreational use are goal-oriented, interventionist activities. In 1966, J.A. Wagar proposed three underlying premises as forming the foundation for these activities. The first of these premises is that outdoor recreation planning and management are product oriented and are undertaken, at public expense, in order to provide benefits to individuals and society; the second is that individuals seek to engage in recreation activity in order to satisfy one or more needs or desires; and the third is that the quality of the recreation opportunity provided and, by implication, the success of the planning and management effort are functions of how well these needs or desires are met.

Several issues of direct concern to management arise from these premises. What is the nature of outdoor recreation? What is the fundamental product of the planning and

management effort? What are the satisfactions sought by recreationists? How will manipulation of elements under management control affect the achievement of those sought-after satisfactions? Questions of this nature have never been addressed in the context of resource management in Tasmania. Recreation facilities have been provided where numbers appeared to warrant such development and as finances allowed. Recreation planning within the state's land managing agencies has been physical planning directed at area acquisition and development with recreation considered solely in the context of land use.

One approach to the issues and challenges of recreation planning, based on users, adopts the view that outdoor recreation is best described as a behavioral process. It consists of individuals engaging in activities of choice, in selected environments, to achieve specific and predictable ends (Driver and Tocher 1970; Brown, Dyer and Whaley 1973; Hendee 1974; Driver and Brown 1975; Brown 1979). It is a production process requiring inputs of various sorts, and it results in the creation of the desired product - human satisfaction. The inputs to the process are provided by two agents: the individual participant, and the management agency responsible for the area in which the participant chooses to recreate.

The individual arrives on-site equipped with certain motives (needs, wants, or desires), expectations, tastes, and goals

which are activated or shaped by personal experience, knowledge or information, various social factors, and culture (Sapora and Mitchell 1961; Driver and Brown 1975; Driver 1976; Brown 1977). These are the pre-engagement inputs of the participant and they combine to generate a demand hierarchy. This suggested demand hierarchy consists of the activities to be engaged in, the settings in which the participation will occur, the satisfactions arising from that participation, and resultant benefits. (Driver 1976; Driver and Brown 1978).

The on-site input of the management agency consists of the control it exercises over the recreation environment. This environment has three identifiable components: the physical, the social, and the managerial. Together, these components define the recreation opportunity setting (Clark and Stankey 1979). This opportunity setting provides the surroundings for the participant's pursuit and realization of sought-after satisfactions. The provision of an appropriate setting is a necessary, but not sufficient, condition for the realization of user satisfactions and benefits as their achievement is necessarily reliant upon the participant. The opportunity setting is, however, the fundamental product of the planning and management effort.

But what are recreationists looking for? Beyond basic physiological drives, W.I. Thomas (1917) postulated a set of universal wishes or desires that motivated human behavior.

These wishes centred upon the themes of new experience, security, response, and recognition. In 1961, Sapora and Mitchell suggested that these general themes might be useful in the study of recreation behavior and added two additional themes: participation, and the aesthetic. Working from extensive survey research, Driver (1977) developed a series of 'outcome domains', reflecting the central themes of these hypothesised universal wishes, which attempt to both identify the satisfactions that participants commonly associate with recreation participation and provide a means to assess their relative importance. These domains contribute to defining the recreation experience package in terms of the satisfactions that participants associate with specific activity - setting combinations.

There have been a considerable number of studies of the perceptions, satisfactions, and goals of North American recreationists participating in a range of activities in various settings (Lucas 1964; Shafer and Mietz 1969; Peterson 1971, 1974; Moeller and Engelken 1972; More 1973; Stankey 1973; Hendee 1974; Wellman 1975; Sauer and McDowell 1975; Clark et al. 1971; Knopf et al. 1973, 1983; Potter et al. 1973; Manfredo et al. 1978; Brown et al. 1977; Hautaluoma and Brown 1978; Driver and Brown 1978; Haas 1979; Haas et al. 1979, 1980; Driver and Brown 1980; Rosenthal and Driver 1983; McDonald and Hammitt 1983). These studies tend to support several propositions. One of these propositions is that the types of experiences or satisfactions associated

with specific activities and settings are relatively constant, even though the importance of specific experiences varies from user to user. This relative constancy makes it possible for a management agency to develop a clearer understanding of the broad experience opportunities it is providing; that is, the combinations of activity - setting - satisfaction opportunities available to users, in spite of individual user variability.

Another important proposition is that different activities and settings not only tend to produce differing ranges of experiences and satisfactions but the relative importance of satisfactions that are common varies among activity - setting combinations. While different activity - setting combinations may facilitate the achievement of approximately similar satisfactions, the relative importance of these satisfactions tends to vary. The identification of the satisfactions generally associated with the opportunity setting is only a first step. The identification of the relative importance of these satisfactions is a necessary follow-up.

Finally, while an activity - setting may facilitate multiple experiences and satisfactions, all other things being equal, those that are valued most highly are the chief determinants of the decision to participate and, hence, to the overall satisfaction of the recreationist with the engagement.

If progress can be made towards an understanding of the experiences/satisfactions associated with any opportunity setting and a knowledge of which of these experiences/satisfactions are most highly valued by users in general, as well as by specific sub-groups, management can be more rational. The identification of the experiences and satisfactions commonly associated with activities and specific opportunity settings or setting elements would allow management to more clearly identify the outcomes it is facilitating; to identify and correct elements which may be inappropriate or incompatible with the outcomes sought by its user groups; and to evaluate proposed programmes on the basis of their likely impact on the settings provided and hence, on the outcome opportunities made available. Planning and management can then become more goal directed with management goals reflecting the aspirations of users.

The assumption that individuals deliberately seek to undertake a given activity, in a specific environment, to realize a predictable recreation experience, is widely accepted. The approaches to recreation planning, based on this assumption, the Recreation Opportunity Spectrum (ROS) and Recreation Opportunity Planning (ROP), while criticised for an excessive emphasis on biophysical parameters (Beaulieu and Schreyer 1984), have seen application to the inventory of natural areas, the assessment of the effects of management action on available experience opportunities resulting from modification of situational attributes, and

general use in land management planning (Brown 1979; Brown, Driver and Berry 1980; Manfredo and Brown 1980; Brown, Driver and McConnell 1978; Clark and Stankey 1979; Stankey and Brown 1981; Chenoweth 1984). The ROS now forms the basic framework for inventorying, planning and managing recreation resources within areas controlled by the US Forest Service in accordance with the Forest and Rangeland Renewable Resources Planning Act (1974) and the National Forest Management Act (1976).

In Australia, the concepts embodied within the ROS and ROP have received considerable attention but the number of practitioners applying the ROS/ROP concepts remains small. Efforts have been made to use the ROS as an assessment tool (Chenoweth 1984) but it has not generally been taken up as a planning tool (Jackson 1986). As yet, even less attention has been given to the study of the motivations, perceptions and goals of Australian users. As the basis for the implementation of the ROS and ROP rests with the classification of social, physical and managerial conditions in terms of the experience opportunities these conditions are likely to promote, it is important that the relationships between these environments and the opportunities they provide for local users be better understood.

I.5. Study Aims:

In addressing the future data needs for the management of rivers, and all other outdoor recreation areas, Brown (1977) maintained that the foremost data need was in the area of user demands including the consequences desired from the recreation engagement, and the resource, social and managerial attributes that are perceived to contribute to those consequences. Lime (1977) and Brown (1977) maintain that, in future, data on attitudes, experiences and preferences will form a vital and increasingly important input to the planning and management of river areas (Lime 1977; Brown 1977).

In view of the virtual absence of data on rafting in Australia, and because the planning for the future use of the Franklin - Lower Gordon Wild Rivers National Park is now underway, this study concentrated on rafters and the Franklin River. The main objectives of the study were:

(1) to identify use and user characteristics of the major parks of the region with an emphasis on the Franklin - Lower Gordon Wild Rivers National Park and to make an inter-park comparison of these characteristics;

(2) to determine the general outcome profiles (groupings of sought-after satisfactions or outcomes) associated by visitors with the parks and the broad activity-setting

combinations common in the region's parks; these activity-setting combinations reflecting not only activities but also varying settings in terms of a recreation opportunity spectrum;

(3) to test whether the experience outcomes or satisfactions associated by participants with these particular activity - settings are statistically dissimilar;

(4) to examine one particular activity group, those rafting the Franklin - Lower Gordon Rivers, to investigate the possible existance of differences (in terms of sought-after satisfactions) between subgroupings considered managerially different (private and commercial parties), to determine their responses to selected management options; and

(5) to assess the potential linkage between valued experience outcomes or satisfactions the response of participants in general and rafters in particular, to possible management alternatives for the region and the Franklin - Lower Gordon.

The pursuit of these objectives will contribute to the achievement of the long term goal of successful management of the Franklin - Lower Gordon Wild Rivers National Park by providing a baseline description of use and users during the 1981 - 1983 seasons in the context of the general pattern of use seen by other major parks in the region; by providing

the management planners of the National Parks and Wildlife Service with user-provided data on the nature of the 'products' being provided by the park during this period; and by providing planners with an initial user reaction to currently contemplated management prescriptions as an input to future public participation in the formulation of a management plan. Its primary purpose to provide management information and to determine whether a number of readily identifiable groups of users have sufficiently different valued experience outcomes or satisfactions so as to warrant more detailed investigation and separate consideration on the basis of those differences.

CHAPTER TWO

CONCEPTUAL AND THEORETICAL BASIS FOR A BEHAVIORAL APPROACH TO RECREATION PLANNING AND MANAGEMENT

There are four basic approaches to recreation planning and, while they are not mutually exclusive, there are significant differences in focus and purpose. Gold (1980) labels these as the activity, the economic, the resource, and the behavioral approaches.

The first of these, the activity approach, considers recreation primarily as a set of activities in isolation from any larger context. Participation is the measure of demand and planning is geared towards meeting future physical requirements based upon extrapolation of current trends.

The economic approach, pioneered by Clawson and Knetsch (1966), considers recreation as an economic good. It focuses on the questions of market demand, pricing, and benefit-cost ratios as inputs to planning. Its overall goal is to bring some measure of economic rationality to the expenditure of public funds for the provision of recreation services.

The resource approach is primarily concerned with the assessment of land capability and suitability with

ecological considerations the dominant factor in the planning process. This approach to planning generally developed to a great extent out of the work of McHarg (1971).

Finally, the behavioral approach focuses on motivation, user expectations and perceptions, the satisfactions that recreationists pursue through participation, and how various factors under management control affect that process. Recreation opportunity planning has its basis in the behavioral approach which constitutes the framework for this study.

This chapter examines the conceptual and theoretical basis of the behavioral approach, how its adherents define recreation, the psychological framework within which it operates, and its application to recreation research.

II.1. Defining Recreation:

Recreation has been assigned numerous definitions and interpretations reflecting the approach adopted. Behaviorists predominantly define recreation as a state of mind or a particular type of experience. Slavson (1946) was one of the earliest writers to adopt a behavioral approach, suggesting that the critical elements defining recreation consisted of the motives, attitudes and values of the participant. Butler (1959) defined recreation as an

activity or experience, engaged in voluntarily, resulting in satisfaction.

Millar (1968), discussing the closely related term 'play', maintained the term is best used as an adverb to describe how and under what conditions an action is performed rather than as a noun describing a class of activities. For example, the activities involved in recreational fishing may be indistinguishable from those involved in the commercial fishing of certain species, the only difference being the mental state of the participant. Following this general line, Kraus (1971) defined recreation as an emotional condition independent of activity or set leisure-time, involving feelings of well-being, self-satisfaction, personal worth and pleasure. It involves the re-enforcement of positive self-image in response to aesthetic experience, achievement of personal goals, or positive feedback from others.

Driver and Brown (1975) chose to define recreation as a type of human experience finding its source in intrinsically rewarding, voluntary engagements undertaken during otherwise unobligated time. Clawson and Knetsch (1966) had earlier suggested that this experience was the emotional and inspirational response to the engagement, with Driver (1976) expanding on this to include the total possible range of mental, physical and spiritual responses.

The general acceptance of these latter definitions with their emphasis on emotional response was reflected in their adoption by the U.S. Nationwide Outdoor Recreation Plan (Heritage Conservation and Recreation Service 1979).

Considering the recreation engagement as a production process, the products of that process follow directly from the above definitions, that is, satisfactions (Butler 1959), emotional and inspirational experiences (Clawson and Knetsch 1966), feelings of well-being, self-satisfaction, personal worth and pleasure (Kraus 1971), a package of experiences (Driver and Tocher 1970), multiple satisfactions (Wagar 1964; Hendee 1974), and psychological outcomes (Driver and Brown 1978).

Attempts have been made to identify the products (the experiences, outcomes or satisfactions) that participants associate with specific recreation engagements. Numerous studies were undertaken of campers, walkers, hunters, fishermen, picnickers and wilderness users for this specific purpose in the middle and late 1970s (Brown, Hautaluoma and McPhail 1977; Driver and Knopf 1976; Hendee 1974; Knopf, Driver and Bassett 1973; Potter, Hendee and Clark 1973; Driver and Cooksey 1977; Driver 1977; Haas 1979). These studies indicated that any one recreation engagement may provide a number of outcomes or experiences. For example, contact with nature, the harvest of game, the use of equipment, out-group contact, and the use and development of

skills are important attributes that deer hunters have associated with recreational hunting (Hautaluoma and Brown 1978). For wilderness users, the primary attributes of the experience have included contact with nature, escape, in-group contact, and feelings of freedom and autonomy (Haas 1979).

This does not imply that the experiences associated with a given engagement are fixed, rather that these particular attributes are those that are commonly associated with these engagements within the cultural and social contexts in which they have been studied. Individuals or subgroupings of participants may have different perceptions or values which might lead them to associate different experiences with these engagements or, where the expected experiences are the same, to place emphasis or priority on different dimensions of the experience.

From a behavioral process view, the recreation engagement is the means, selected by the participant, through which a sought-after recreation experience, itself a composite of the physical, emotional and psychological responses to that engagement, is pursued resulting in the achievement of some benefit.

II.2. The Psychological Framework:

The behavioral approach to recreation study has its roots in

what Korman (1974) refers to as the cultural tradition of motivation research. This tradition or school emphasizes the importance of learned experiences and the psycho-social environment and tends to make use of the terms wishes, desires, feelings, demands, needs and motives as opposed to instincts or drives. W.I. Thomas (1917) proposed that the needs, motives and desires associated with human behavior might be reduced to four fundamental wishes, or fields of wishes: the desire for new and stimulating experiences, the desire for security and belongingness, the desire for mastery or response, and the desire for recognition.

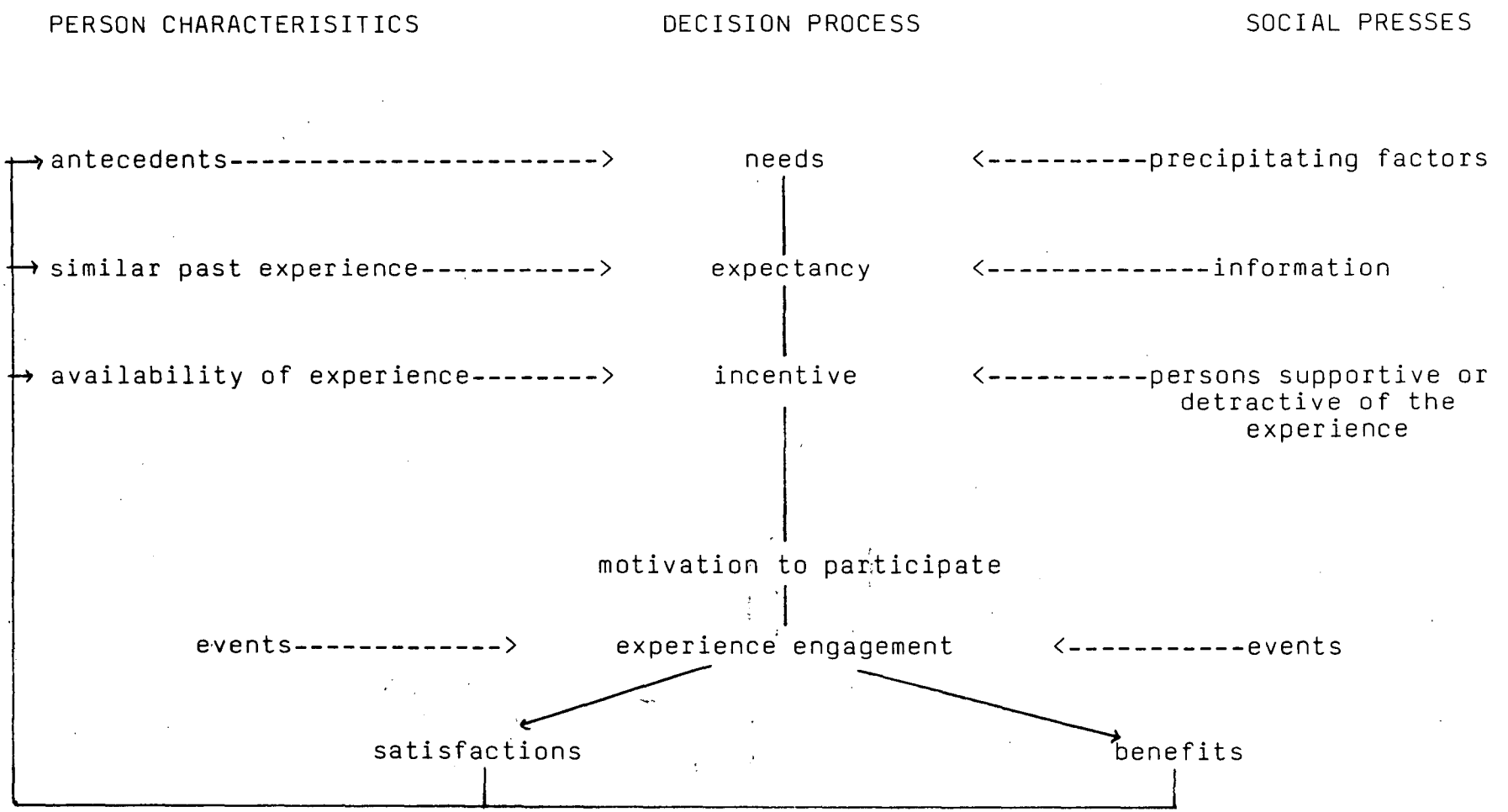
This concept of generalizable human wants or needs was further developed in Maslow's (1954) classic hierarchy of human needs although, beyond the most basic level of physiological requirements, it is thought unlikely that any priority can be assigned to Maslow's suggested levels (Lawler and Shuttle 1972). At the physiological level, the 'needs' are the prerequisites for survival and reproduction while, at the other levels, these 'needs' have been defined as a group or cluster of goals or outcomes that an individual might seek to achieve but which do not have an immediate effect on the individual's biological well-being (Porter, Lawler and Shuttle 1975).

It is fundamental to the behavioral approach to recreation that motivation is a cognitive process. It has been suggested that human behavior is largely directly or

indirectly problem solving (Luce and Raiffa 1957; Festinger 1958; White 1959; Miller, Galanter and Pribram 1960). Driver and Brown (1975) maintain that recreation behavior is essentially indistinguishable from any other type of human behavior in that it, too, is directed at problem solving. A problem exists when there is some disparity, or perceived disparity, betweens an individual's existing state and his desired state, the latter being some hypothetical condition where all needs wishes and desires are met. An individual seeks out and participates in recreation engagements in order to solve problems that he can not, or can not so easily, solve otherwise. Recreation is thus a means by which an individual can attempt to meet those of his needs that he is unable to adequately satisfy in his otherwise committed time.

Largely on this basis, that behavior consists of a continuing series of problem directed choices designed to obtain the best outcomes possible, Brown (1977a) produced a simplified recreationists' decision model (Figure 2.1) incorporating elements of Wagar's (1966) recreation management model, Nicosia's (1966) consumer decision model, and the expectancy value models associated with the cognitive approach to motivation (Tolman 1955; Edwards 1955; Atkinson 1964; Birch and Verhoff 1965; Atkinson and Birch 1970; Porter and Lawler 1968). Under this expectancy-value framework, the determinants of behavior consist of the personal motives or demands of the individual and the

FIGURE 2.1 RECREATIONISTS' DECISION MODEL



expectancy of value achievement in the given environment as perceived by the individual participant (Korman 1974).

The thrust of this model is that the individual seeks out a given experience engagement on the basis of his knowledge of its availability and his expectation that he will achieve certain satisfactions and benefits through participation. The needs, desires or wishes that are felt by the individual are determined by his personal situation, inclinations and the social environment in which he lives. The priority that these needs assume within the individual determines the priority and importance assigned to the achievement of any possible outcomes. The link between these outcomes and the experience engagement lies with the individual's perception that an engagement of a given nature may yield certain outcomes. This perception or expectancy is the result of his interpretation of the results of past experiences, cultural milieu and information or opinion from external sources as to the probability of achieving the sought-after outcomes through a particular engagement. Whether or not the individual will then participate is further affected by relevant social and economic factors - time, money, physical accessibility, activities of other would-be or actual participants.

Considering recreation managers as operating a service delivery system and recreationists as typical consumers has allowed the application of theories of consumer behavior and

choice to recreation participation. One of the results has been the consideration of the possible application of techniques such as location - allocation modelling, normally used for locating industrial plant or service outlets, to the geographic distribution of recreation opportunities (Ross 1980).

As a 'good' or 'service', recreation is a multi-attribute or multi-dimensional good whose attributes are largely non-compensatory. For example, an individual may associate the following primary attributes with trout fishing: catching fish for later consumption; experiencing peace and quiet; and developing his skills with dry flies. These three attributes or dimensions of the trout fishing engagement determine its overall utility or value. Each is separate and non-comparable. Catching more fish would not compensate for noise or crowding. Because they are non-compensating, all three attributes must be included in any assessment of the experience. The individual will evaluate the option to participate on the basis of his expectancy of value returned along each of the dimensions he considers relevant. This results in an attribute profile for trout fishing, in this example, that is non-collapsible - no single measure of satisfaction or quality is possible. While the number of attributes or dimensions is theoretically very large, Porter, Lawler and Hackman (1975) report that in everyday life, most individuals consider only six or seven salient outcomes for any contemplated

behavior.

If the theories of consumer choice and behavior are accepted as appropriate, rational planning for an agency charged with the task of managing recreation opportunities requires the identification of the relevant attribute profiles or dimensions of those opportunities. To a large extent recreation planners subjectively and often unconsciously do this when they design facilities to provide the attributes they feel are appropriate. So long as the planner's perception of the opprtunity being sought by users is reasonably accurate, problems do not arise; but research has demonstrated that the perception of managers is often considerably at variance with that of users (Hendee and Harris 1970). This suggests that more rigorous investigation is required before an agency can fully know the valued attributes of the opportunities it is providing.

II.3. The Recreation Demand Hierarchy:

The planning and management of recreation have been hampered by an inadequate knowledge of the nature of what is being sought through participation and the absence of any systematic means of dealing with the data that goes beyond that which is required of the basic 'activity' approach. The recreation demand hierarchy proposed by Driver and Brown (1978) is a conceptualization of the components of recreation demand (and hence supply) separated into four

distinct categories. 'Demand' in this usage is not the economists' schedule of consumption at varying price, but is used in the wider sense of a behavioral tendency that will influence the direction, persistence and intensity of recreation behavior.

The components of recreation demand identified by the Driver and Brown hierarchy consist of the activity engaged in (demand level one), the setting in which the activity takes place [the opportunity setting] (demand level two), the immediate outcomes, satisfactions or experiences associated with that activity-setting complex (demand level three), and the long-term benefits which accrue to the individual and society as a result (demand level four).

II.3.1. Demand Level One:

The first demand level considers recreation in the traditional activity fashion. The demand, at this level, is for opportunities to participate in activities of choice. The relevant activities include all of the pastimes in which an individual might wish to participate, and which the participant thinks of as 'recreational'. A comprehensive listing of all such activities would be almost endless and the variety infinite. Even on an individual basis the listing would be extensive and subject to change due to changing societal trends, fashions, tastes and the participant's life stage. It is at this level that the

participant makes the most obvious decisions in selecting what it is he wants to 'do'. It is also at this level that quantification is most straight forward, at least in terms of expressed or effective demand.

II.3.2. Demand Level Two:

The second demand level considers the setting in which the participant undertakes a given activity. There are three components which together form the overall setting. These components consist of the physical environment, the social environment, and the managerial environment.

The physical environment is where the activity takes place and includes all those parameters which serve to define it, including its visual or scenic qualities and even its auditory or olfactory qualities or characteristics. An obvious example of a physical setting where these three categories of sensory inputs are of great importance is that of 'wilderness', often defined as an area where there is little or no visible evidence of humanity's presence, a place remote from the sights, sounds and smells of modern civilization.

The social environment is the second element that contributes to the setting. An individual may seek to participate with family, friends or associates but, at the same time, removed from strangers. A participant may also

wish to experience solitude or, as has been found to be the case with certain age groups, crowding in the form of concentrations of peers (Hecock 1970).

The importance of the social environment has led to a considerable research effort directed at the determination of sociological carrying capacities at recreation areas. This has largely been concerned with determining the numbers of people that can be accommodated in a given area at any given time before the sum of the participants' satisfaction begins to decline through a reduction in individual satisfaction as a result of crowding.

Changes in social environment are believed to contribute to what has been termed 'recreation succession'. When the number or behavior of new users entering an area begins to adversely affect the satisfaction of existing users, those existing users tend to modify their own recreation behavior by relocating to new areas, adopting new activities, or by adjusting their expectations to match the new conditions (Shontz et al. 1975). While the physical environment may remain substantially unchanged, the social environment and changes in it will create an identifiably different experience opportunity as perceived by the participant.

The managerial environment is the final element and consists of the possible rules, regulations, policies, or even management presence, which may limit participants' freedom

of action, degree of imposed self-reliance or independence.

At this second demand level, quantification is more difficult. The demand is not for single activities but for more complex settings, parts of which are determined by the participants themselves. The choices that must be made by the participant are also more complex and may be made less consciously as the individual selects 'who with' and 'under what conditions' he will participate. For example, an individual may choose to go bushwalking with friends in an area where out-group contacts are unlikely (social environment), in a rugged highland area (physical environment) where there is a well marked track and several huts supplied with fuel (managerial environment). While the decision to go bushwalking is a conscious and deliberate one, the process of selecting the setting on the basis of these attributes may be less so.

Brown, Driver and McConnell (1978) suggested that with the development of specific and objective criteria, an outdoor recreation supply inventory and classification system could be developed on the basis of this demand level. This approach was also adopted by Clark and Stankey (1979) in their framework for recreation planning, management and research. Both propose that settings can be arrayed along a continuum that reflects the general range of recreational opportunities sought by users. This continuum, termed the recreation opportunity spectrum, is defined in terms of

factors that are: (1) observable and measureable; (2) are directly under managment control; (3) are related to recreationists' preferences and which affect their selection of use areas; and (4) are characterized by a range of conditions. Six factors are suggested as serving to usefully define the opportunity setting: access, other non-recreational uses, on-site management social interaction (in terms of the likelihood of out-group contacts), acceptablilty of visitor impacts, and acceptable levels of regimentation. Any setting provided can be defined in terms of these factors which allow it to be characterised as occupying some position along the opportunity spectrum. Once relevant categories and standards have been determined, that relative position can then be used to provide broad guidelines for future planning or management action. The category labels also serve to provide would-be users with a general understanding of the conditions they are likely to encounter in the supplied settings.

II.3.3. Demand Level Three:

The third demand level consists of the experiences and immediate satisfactions resulting from the recreation engagement. The demand is for the specific satisfying experiences that are desired, expected and sought by the participant. It is suggested that the achievement of these experiences forms the underlying motivation for participation.

The experiences or outcomes associated with participation can be considered as psychological constructs (Haas 1979) and may include such items as experiencing risk, achieving peer recognition or status, escape from family, social or work related pressures, in-group sharing, contact with nature, and skill acquisition. In terms of the bushwalker example, the question for the participant, at this level, is: "what will I get out of this engagement?" and might yield: a change from routine, a time to socialise with friends, an opportunity to experience physical exertion, and contact with nature combined with an escape from urban influences and pressures. These sought-after outcomes then become part of the attribute profile of the engagement in the mind of the participant. While the question of what will be achieved through participation may not actually be addressed, the participant will have expectations of achievement which would constitute the likely response were the question put by an external agent.

Any engagement will result in a number of outcomes contributing to overall satisfaction. It is believed that a grouping of four to eight highly valued outcomes usually serve as reasons to participate, the number depending on the nature of the recreation engagement (Driver and Brown 1978). These bundles of outcomes become 'experience opportunities' that are relatively unique to the activity-setting in which the participants choose to engage. This activity-setting is

the total recreation environment including as it does the participant's social environment as well as the physical and managerial environments. The perceived experience opportunities will vary from engagement to engagement and from user to user, but the within engagement differences are normally less than the between engagement differences (Driver and Brown 1978).

The possibility that different activities and settings may provide the same, or sufficiently similar, experience opportunities when components of the activity-setting complex that are non-essential to the sought-after outcomes are changed gave rise to the recreation substitutability concept. This concept recognises the primacy of the participants' motives, wishes, needs and desires, and attempts to identify and classify opportunities on the basis of experiential similarities (Hendee and Burdge 1974). It is the acceptance of the primacy of importance of experience opportunities that forms the basis of the recreation opportunity spectrum which has been adopted by the US Forest Service, Bureau of Land Management and the New South Wales Department of Parks and Wildlife.

II.3.4. Demand Level Four:

The demands at this level of the hierarchy are for the long-term benefits or desirable end states valued by both the individual and society. The justification for the

expenditure of public funds to provide recreation opportunities has long been that participation in such engagements will promote certain societal values. Early definitions of recreation stressed its potential in maintaining public health and re-invigorating the individual for more productive pastimes, resulting in improved worker performance (Kraus 1971). Ovington (1979 p.46) points out that concern for public health was one of the principal motivations behind the establishment of Australia's first national park at Port Hacking "...overcrowding, growing incidence of disease and high infant mortality rates in Sydney were seen by petitioners of Parliament as reasons for claiming some nearby land for parks and recreation." Recreation is no longer seen just as a restorative but as a means of developing 'better' individuals. Rodney and Toalson (1981) include, in the list of benefits that serve as the objectives (demands) of recreation services, improved emotional and physical health, character development, widening of interests, skill development, socialization, economic value and growth, and community stability.

In spite of the long and commonly held belief that recreation can fulfil these demands, research in this area is not well advanced. Geist (1978), however, maintains that his research into the maximization of health through lifestyle suggests that recreation in natural settings appears to be vital to increasing the individual's physical, intellectual and social competence which, in turn, maximizes

health, develops a sense of mastery, and increases lifespan.

II.3.5. Value of the Demand Model:

The recreation demand hierarchy provides a model which attempts to integrate recreation into the wider context of human behavior while also attempting to provide a means for the useful application of behavioral information at the management level. Mercer (1981) points out that the majority of Australian recreation studies have concentrated on activities and facilities - essentially demand levels one and two, although the social and managerial components of the recreation environment are often overlooked. He goes on to maintain that recreation studies have largely been head-counting exercises, lacking any firm theoretical basis, as part of a very pragmatic approach to dealing with the day-to-day problems of the responsible managing authorities.

The growth in recreation participation in non-urban settings in North America and the heavy use pressures placed on natural areas has necessitated a greater effort in research and planning than has occurred in Australia and it has been repeatedly shown that the activity approach is inadequate in meeting the needs of a rational planning and management process (Wagar 1966; Driver and Brown 1975; Wagar 1977; Stankey and Brown 1981; Haas, Driver and Brown 1980; McCool

1980). The emerging issues often involve user conflict (where what might be considered reasonable activities and behavior on the part of one user group adversely affects the satisfaction of other participant groups engaged in dissimilar activities), the supply of opportunities and opportunity alternatives (which requires an understanding of what constitutes an 'opportunity' for the participant), or, on a larger scale, the issue of costs and benefits of devoting what are often large areas and considerable resources to such use.

This model suggests that, while demand level one may be the least difficult to determine, reliance on such information alone is both inadequate and inappropriate. Activities are the means for the participant and not the ends. As means, there exists the possibility for extensive substitution of various activities. Such substitutions may provide opportunities for better resource allocation and utilization. Individuals seek certain settings in which to participate and the supply of these settings and the control of their characteristics rests with management. How the setting elements are controlled or manipulated and what settings are made available will determine the availability of experience opportunities and, in turn, the potential outcomes and satisfactions which provide the motivation for participation. The task of management is to identify the experience opportunities available and to direct the planning and management effort towards those that can be

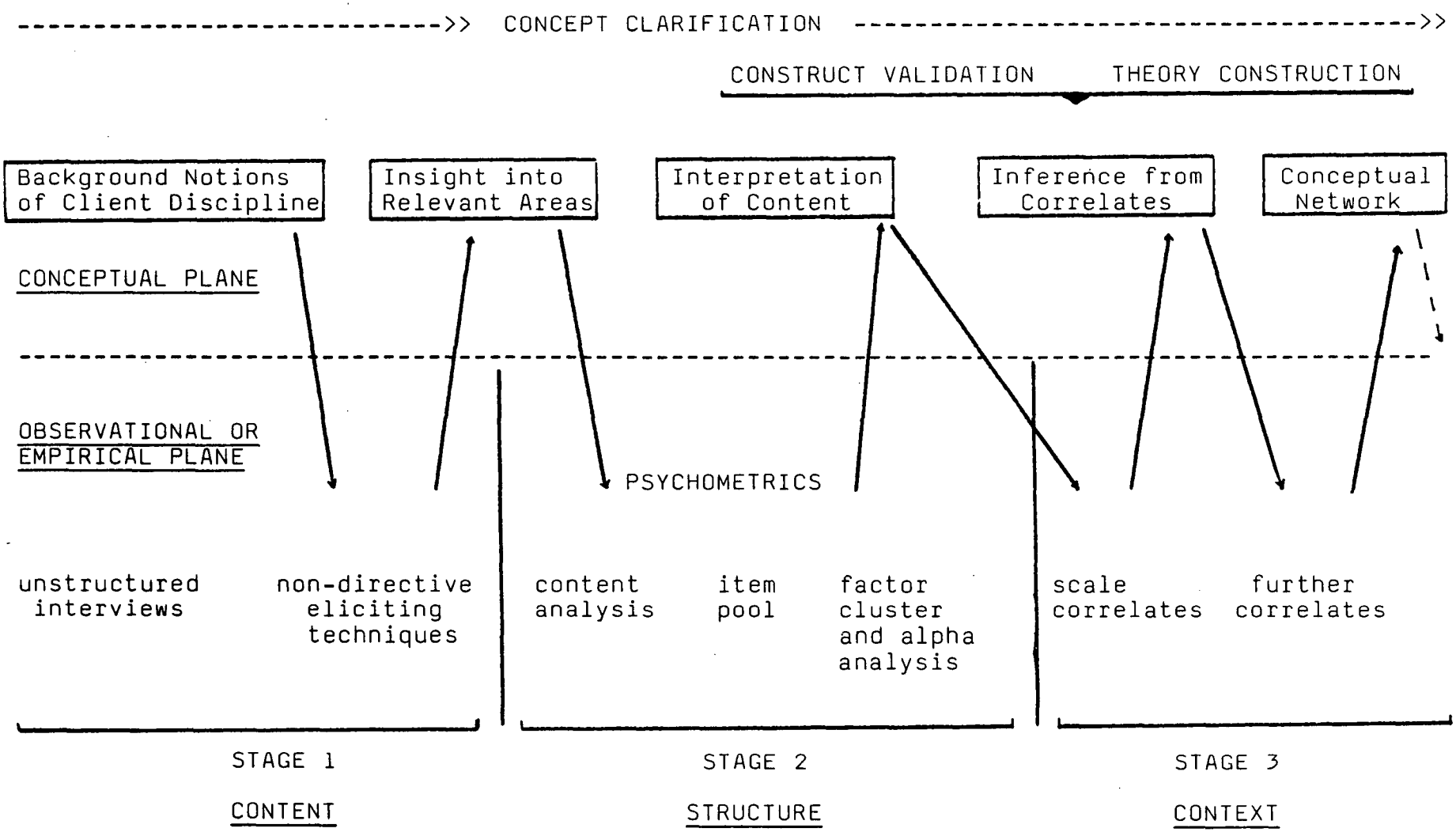
supplied within the limitations of the areas under its control, the resources available, the existing supply of opportunities, and the mandate of the agency involved.

II.4. The Identification and Quantification of Recreation Experiences:

If management is to plan and manage its resources on the basis of the experience opportunities it does, or can, provide, the dimensions of those experience opportunities that are relevant to users must be identified and assessed. The decision-making models associated with the expectancy-value theories of motivation maintain that an individual is motivated to act on the basis of the expectancy that an action will result in a given outcome(s) and the importance, or value, that the individual assigns to that outcome. A considerable research effort has been directed towards the identification of outcomes commonly associated with outdoor recreation and the development of psychometric instruments for quantifying the relative importance of these outcomes (Driver and Knopf 1976; Brown et al. 1978; Manfredo et al. 1977; Driver 1977; Driver and Cooksey 1977; Hautaluoma and Brown 1978; Haas et al. 1979; Brown and Haas 1980; Haas et al. 1980).

The importance placed on any given potential outcome of a recreation engagement is an attitude. McKennell (1974) points out that there are three phases to the measurement of attitude, which he terms content, structure and context.

FIGURE 2.2 ATTITUDE MEASUREMENT MODEL (McKennell 1974)



The content phase is where the concept of the domain of variables, in this case the outcomes associated with recreation engagements, is established and a set of indicators is selected to represent it. The structure phase consists of the development of the operational definition of the concept - establishing the dimensional properties of the domain. Finally, the context phase involves linking the resultant scores to other variables as establishing the meaning of the measurements. McKennell's (1974) schematic diagram of these phases is shown in Figure 2.2.

In the process of the development of instruments for the quantification of outcomes associated with outdoor recreation, research is now at the combined stages two and three. From the conceptual level of Thomas' (1917) four universal wishes or motivations, through Sappora and Mitchell's (1961) six categories of recreation motivations, a greatly expanded and more specific set of domains, scales and scale items has been developed at the operational level to assess the perceived importance of these outcomes.

In 1977, Driver reported the development of an item pool of scales for quantifying psychological outcomes associated with recreation participation. This item pool arose out of extensive survey research involving more than twenty-five studies of 16 000 respondents (Table 2.1). By 1979 continued work on the development of this item pool had involved in excess of fifty studies and 40 000 respondents

TABLE 2.1
DOMAINS AND ITEM SCALES (DRIVER 1979)

DOMAINS	ITEM SCALE
1. Achievement	Reinforcing self-image
	Social recognition
	Competence testing
	Seeking stimulation
2. Leadership/ Autonomy	Independence/autonomy
	Control/power
	Teaching/sharing skills
	Leading others
3. Risk-Taking	Risk-Taking
4. Equipment	Equipment
5. Family Togetherness	Family togetherness
6. Being with People	Being with friends
	Being with similar people
7. Meeting/Observing New People	Meeting new people
	Observing other people
8. Learning/Discovery	General learning
	Exploration
9. Relationships with Nature	Scenery
	General nature experience
	Learning about nature
10. Reflecting on Spiritual Values	Spiritual values
	Introspection
11. Creativity	Creativity
12. Nostalgia	Nostalgia
13. Exercise/Fitness	Exercise/fitness
14. Physical Rest	Physical rest
15. Escape From Personal/ Social Pressures	Tension release
	Slow down mentally
	Escape role overload
	Escape daily routine
	Escape perceived pressures
16. Escape Physical Pressures	Tranquility
	Seek open space
	Privacy
	Escape crowds
	Escape physical stressors
17. Security	Security
18. Escape Family	Escape family
19. Temperature	Temperature

(Haas 1979). As a consequence of this research, there is considerable background in the operationalization of the concept and, allowing for modification for specific application and further development, the pool provides a broadly based tool for the study of recreation outcomes.

Several efforts have been made to identify and measure the psychological outcomes associated with hunting and wilderness recreation engagements. Potter, Hendee and Clark (1973) developed a list of 73 possible attributes (or outcomes) and surveyed approximately 4000 hunters in Washington State in order to assess the importance of the various components of the hunting engagement. Factor analysis reduced the 73 items to 12 dimensions (outcome domains) among which were groupings characterised by themes of nature contact, escape, shooting, skill, vicarious pleasure, trophy display, harvest, equipment, and social contact (Table 2.2).

Potter, Hendee and Clark (1973) were attempting to define the product attributes (the outcome domains) for a very broadly defined activity "hunting" in virtually undefined environmental, social, and managerial settings i.e. the State of Washington. As the activity is but one component of the recreation experience, the outcome profiles of particular types of hunting activity in particular settings might be identifiable within the overall population sample.

TABLE 2.2
DOMAINS AND ITEM SCALES - DEER HUNTING
(HAUTALUOMA AND BROWN 1979)

DOMAINS	SCALE ITEMS
1. Nature	Being close to nature
	Getting away from cvilization
	Just being outdoors
	Smells and sounds of the woods and field
	Physical exercise
	Camping out while hunting
	Getting away from everyday problems
	At least seeing some wildlife
2. Harvest	Getting my bag limit
	The amount of game bagged
	Showing bagged game to family and friends
	Bringing game home
	Bagging as much game as my hunting companions
	Bagging a very large animal or bird
	Killing game
	Bagging more game than hunters in other parties
	Seeing game fall as I shoot
3. Equipment	Having the best hunting equipment
	Being a well-equipped hunter
	Comparing equipment with that of other hunters
	Cleaning and maintaining my hunting equipment
4. Out-Group Contact	Seeing hunters from other parties
	Talking with hunters in other parties
	Seeing hunters in other parties having success
	Seeing very few other hunters while hunting
5. Skill	Out-smarting game
	Stalking game
	Making a difficult shot
	Teaching someone else the skills of hunting

Using the same data, Hautaluoma and Brown (1978) were able to identify different outcome profiles for four categories of hunting (deer only; deer and other big game; deer and small game; deer, large and small game) without reference to setting. Overall, Hautaluoma and Brown (1978) identified ten separate groups of hunters on the basis of their patterns of response across the satisfaction (outcome) domains. These groupings were then compared with other demographic and sociological characteristics to locate possible predictors of experience, and by implication activity-setting, preference. According to Hautaluoma and Brown (1978), this type of data can be used to develop more precise user profiles. This knowledge of specific segments of the user population would enable management to make resource decisions both in general and on an indivdual area basis, based on elements known to be crucial to user satisfaction.

Haas (1979) examined the experience preferences of visitors to three U.S. wilderness areas. Forty-three outcome scale items were used which clustered into ten psychological dimensions (outcome domains) (Table 2.3). The domain profiles for the three areas being shown to be similar, Haas, on the basis of the visitor response patterns, identified five managerially significant groups in one of the areas and used the strength of their responses in an expectancy-valence model of the recreationists' decision making process. These groups were not linked to any particular activity-settings more specific than "wilderness

TABLE 2.3
OUTCOME DOMAINS AND SCALE ITEMS - WEMINUCHE, RAWAH AND EAGLES NEST WILDERNESS STUDY (HAAS 1979)

DOMAINS	SCALE ITEMS
1. Relationships with Nature	Enjoying the scenery Enjoying the sights and sounds of nature Gaining an appreciation of nature Being close to nature Learning more about nature Experiencing new and different things Discovering something new
2. Escaping Physical Pressure	Experiencing the peace and calm Getting away from other people Feeling isolated Being alone Being away from crowds of people Being away from the noise back home Having a change from your everyday life
3. Exercise/ Physical Fitness	Getting exercise Trying to keep physically fit Feeling good after being physically active
4. In-Group Relations	Doing something with your family Being with another member of the family Being with other members of your group Doing things with your companions Being with people having similar values
5. Freedom	Doing things your own way Being obligated to no-one Feeling free from society's restrictions
6. Achievement	Developing your skills and ability Applying skills Teaching your outdoor skills to others Sharing your knowledge with others
7. Reflection on Values	Learning more about yourself Thinking about your personal values Thinking about your future Reflecting on religious or other spiritual values
8. Risk Taking	Taking risks Chancing dangerous situations Feeling frightened Not knowing for sure where you are
9. Risk Avoidance	Being sure what will happen to you Avoiding the unexpected
10. Meeting/ Observing Other People	Meeting other people in the area Seeing other people in the area Being near others who could help if needed Being near considerate people

participation".

During the very early stages in the development of Driver's item pool, studies were primarily conducted as on-site direct interviews. More recently, the more common format has been the self-administered questionnaire, completed off-site and both sent and returned through the mails. A Likert-type scaling system has been the norm and the variable number and labelling of scale intervals used apparently has not significantly altered item inter-relationships (Driver 1977). Factor analysis is then normally used to group related items into domains reflecting the perceived dimensions of the engagement. Individuals' composite scores are then used as estimates of the relative importance of the various dimensions overall, and for various selected subgroups.

II.5. Summary:

Recreation is an experience. It is an emotional, intellectual and psychological response to voluntary participation in activities of choice in a selected environment. This selected recreation environment is a complex situational construct possessing social, physical and managerial characteristics which, in concert, define the opportunity setting in which the individual seeks to participate in order to achieve the sought-after experience. The participant's selection of the activity and setting,

from among a range of alternatives, is a cognitive process involving the participant's expectations of the probability of achieving certain outcomes which he/she associates with the given activity-setting complex, and the relative value that he/she places on their achievement. Satisfaction with a recreation engagement results from the achievement of these expected and valued outcomes which are considered as psychological constructs reflecting generalizable human demands. A framework for the identification and relative measurement of the perceived importance of these outcomes has been suggested and is supported by a body of empirical research.

Considering the provision of recreation opportunities as typical goods or services and participants as rational consumers has allowed the application of a consumer approach to management and planning. If the successful achievement of sought-after and expected outcomes provides the underlying motivation for participation, then management must attempt to discover the outcomes that participants associate with the settings it provides (experience opportunities), it must identify those attributes of the constituent components of the opportunity settings that are relevant to these outcomes, and it must determine the importance, or value, placed upon these outcomes by various identificable and managerially significant segments of the user population. Having acquired this information, management plans or contemplated programmes can be assessed

on the basis of their impact on setting components and hence on the experience opportunities which are the basic product of the management effort.

The experience opportunities examined by this study are those current users associate with the major parks of Tasmania's South West. It examines the major user activities in the parks, the general character of the settings provided and the satisfactions associated with these broad setting categories. It focuses on one specific activity and setting, rafting the Franklin - Gordon River, and examines the relationship between user groups, their sought-after satisfactions and their opinions on management of the resource.

CHAPTER THREE

THE PARKS OF WESTERN TASMANIA AND THE METHODS ADOPTED FOR THE USER STUDY

This chapter outlines the context within which the study was conducted and the procedures adopted. It is divided into five sections.

As the design of the project was influenced by the context of the general availability of data on use and users of Tasmania's national parks and the social conflict that accompanied the proposed dam construction on the Lower Gordon River, the first section outlines the structure and relevant background for the study.

While the study concentrates on Franklin River rafters, users of the other major parks in the region were included in a preliminary survey in order to provide a basis for comparison with rafters and rafting. The second section of the chapter consists of a brief general description of the these parks and their facilities.

The study itself proceeded in two stages, covering two rafting seasons, 1981-1982 (stage one) and 1982-1983 (stage two). The third section outlines the design, distribution, collection and initial processing of the forms used in each

stage.

The fourth section outlines the approach adopted and the techniques applied to the data analysis while the final section indicates a number of limitations inherent in the approach as well as specifically applying to this study.

III.1. Context and Structure:

The Tasmanian National Parks and Wildlife Service is a young organization, set up in 1971, with a very small staff. In 1983, the Service employed just one planning officer for natural areas who was responsible for the management planning of 13 national parks with an area of some 865 000 hectares. Partly due to staffing shortages, the collection of user statistics has been a low priority task which resulted in there being an almost total absence of reliable data. There is a range of figures submitted to the central office but these have been in very crude form consisting of gross estimates made by individual rangers, estimates from receipts on ticket sales where facilities have entry fees, logbook entries, and vehicle estimates based on axle counter readings.

The lack of standardised procedures and the poor quality of the resultant data were long recognized. In 1983, a consultant was hired to suggest changes to streamline collection, handling and storage of routine visitor data

(Carlington 1983). Standardised forms and procedures were recommended and a trial programme introducing these procedures was set in place in the first parks in January 1984. Programmes have also been recommended to provide for the collection of data on campsite, hut and trail use and the policy of promoting visitor registration beyond that involved in the booking of huts and campsites is now being implemented more vigorously and should contribute to improved information on park visitation and use.

These developments are relatively recent and, while the Service would like to acquire a wider range of data on park use, it is hampered by a lack of resources that can be directed to this end. Only one major user study has been conducted in a Tasmanian national park - a one year visitor impact and trail use survey in Cradle Mountain - Lake St. Clair National Park conducted by a graduate student in geography at the University of Tasmania (Calais 1981).

The aim of this study was to collect data on the use and users of the Franklin - Lower Gordon River, their attitudes, preferences and the outcomes associated with the experience of rafting the Franklin. A secondary aim was to place these users, their attitudes, preferences and sought-after outcomes in the larger context of the use of other major western Tasmanian parks during a comparable period (mid-December through March). The purpose of this was to attempt to identify those aspects of the experience

opportunities users associate with the Franklin - Lower Gordon River that distinguish it from other areas.

The first stage of the study addressed the task of identifying the experience opportunities associated with the Franklin - Lower Gordon and the region's other major parks. This stage involved two phases. The first was concerned with establishing a background data base on users of the major parks in the region of the Franklin - Lower Gordon. It was also used to establish a sampling frame for the next phase of the survey dealing with outcome scales and preferences. In the case of the Franklin - Lower Gordon River, it also provided input for the second stage of the study, to be carried out the following year, in the form of user-suggested management options.

Two different, self-administered, questionnaire forms were used in the initial phase of stage one: a one page general form distributed at all locations other than the Franklin - Lower Gordon (Cradle Mountain, Lake St. Clair, Mt. Field and Maydena), and a longer, two-page, form specifically for the Franklin - Lower Gordon. The distribution of these forms was facilitated by the adoption, in 1981, of a policy of levying entry fees to major national parks in Tasmania. The adoption of this policy resulted in the employment of casual personnel to staff entry points and collect fees. These temporary staff distributed forms at Cradle Mountain, Lake St. Clair, Mount Field and Maydena. No fee was levied for

access to the Franklin - Lower Gordon River in 1981, but the normal departure point at the Collingwood bridge was manned by volunteer staff who distributed forms to rafters.

Three thousand of the general forms were distributed at the entry points of the parks where vehicles stopped to pay fees and approximately 800 forms were distributed at the Collingwood bridge, the access point to the Franklin - Lower Gordon. Sixteen hundred twenty-two of the general forms were returned (54%), of which 1116 were usable. The remainder were unusable due to being incomplete, vandalised, or incorrectly completed. The majority of the unusable forms were incorrectly completed and this was the result of individuals attempting a group response on a single form rather than one form for each individual. The return rate for those rafting the Franklin was similar with 419 of the approximately 800 forms distributed being returned (52%), 417 of these forms being usable. The two unusable forms which were returned by rafters were completed with nonsense responses.

The general form requested only factual information from the respondent, covering personal information and trip details (party size, visit duration, activities). The form distributed to Franklin - Lower Gordon River rafters covered this same information but also sought visitor opinion on specific management concerns for rafters. Both of the phase one forms ended with a request that the respondent include a

name and address so that a further questionnaire could be sent. Of the total 1533 usable forms from phase one, 938 (61%) complied with this request and phase two forms were sent to all.

The phase two forms were sent out with business reply envelopes, normally within two weeks of the respondent completing the phase one form on-site. This mail out form had four separate sections: (1) a map on which the respondent was asked to indicate the area of the park he had visited (no maps were included in those forms sent to rafters as the Franklin River corridor is narrow with few options); (2) a section dealing with impressions of access, naturalness, facility suitability, and encounters with other visitors; (3) a section concerned with visitor opinion, in a very general fashion, of various possible management policies for future development and control; and (4) a final section consisting of 62 selected psychological outcome scale items. The response to this single mail-out was the return of 612 completed phase two forms (65%) of the 938 sent out.

Stage two of the study was directed only at Franklin - Lower Gordon River users and was undertaken during the 1982-1983 rafting season (mid-December through March). It consisted of a fairly lengthy, eight page form containing four sections: personal details, trip details, impressions and opinions, and the same psychological outcome scale items as

were used in all areas the previous season.

The prevailing political debate and controversy over the proposed construction of the Lower Gordon dam had considerable impact on this stage of the study. In 1981-1982 a co-operative effort between the National Parks and Wildlife Service and the Tasmanian Branch of The Wilderness Society (a volunteer organization) enabled the full-time staffing of the departure point for Franklin - Lower Gordon River rafters (the National Parks and Wildlife Service providing temporary accommodation and The Wilderness Society providing staff). These personnel advised rafters on conditions, ensured parties registered in the logbook, and distributed the phase one forms.

In 1982-1983, the The Wilderness Society was fully occupied with the organization and management of the protest campaign opposing the construction of the Lower Gordon Hydro Dam and no personnel were available for this study. The National Parks and Wildlife Service requested additional funding for the purpose of stationing a ranger in this location for the duration of the rafting season, but funds were not made available and the National Parks and Wildlife Service was further instructed to remove all signage indicating the location of the departure point. In an effort to deter protesters they were also directed to ban camping at the lower end of the River where protests were being mounted.

The unavailability of on-site personnel led to a drop in the compliance rate for rafters registering as requested, with name and mailing address, to below 20%. This estimate is based on the comparison of the names appearing in the logbook with those on completed questionnaires during the same period. Fewer than 20% of those who had completed and returned questionnaires had registered in the logbook. The principal means of distribution subsequently adopted consisted of leaving supplies of the forms in the box housing the logbook. A total of 800 forms were distributed in this fashion. The number of forms that were collected by rafters is unknown as the registration box was repeatedly vandalised.

One hundred thirty-three forms were posted to individuals who registered correctly, including a mailing address as requested, but for whom no completed form had been turned in on-site. Not all individuals who registered could be identified as two logbooks were lost to vandalism. Forms were also made available at National Parks and Wildlife Service offices and on the principal pickup boat ferrying rafters from the usual terminus of the trip to the town of Strahan. A total of 1100 stage two forms were distributed.

A total of 436 completed stage two forms were returned of which 416 (95%) were usable. Over the two seasons, 1028 individuals completed forms containing outcome preference scale items. Of these, 633 were rafters.

III.2. The Study Areas:

In the first phase of stage one of this study, survey forms were distributed at the entry points of four national parks: Cradle Mountain - Lake St. Clair, Mount Field, Southwest, and the Franklin - Lower Gordon. With the exception of Mount Field, these parks form a contiguous unit, now known as the Western Tasmania Wilderness Parks, occupying 785 612 hectares. Mount Field, Tasmania's first national park, is much smaller (16 257 hectares) and was included due to its close proximity to the other areas. Together, these parks constitute in excess of 90% of Tasmania's national park area and encompass most of the commonly accepted wilderness within the state.

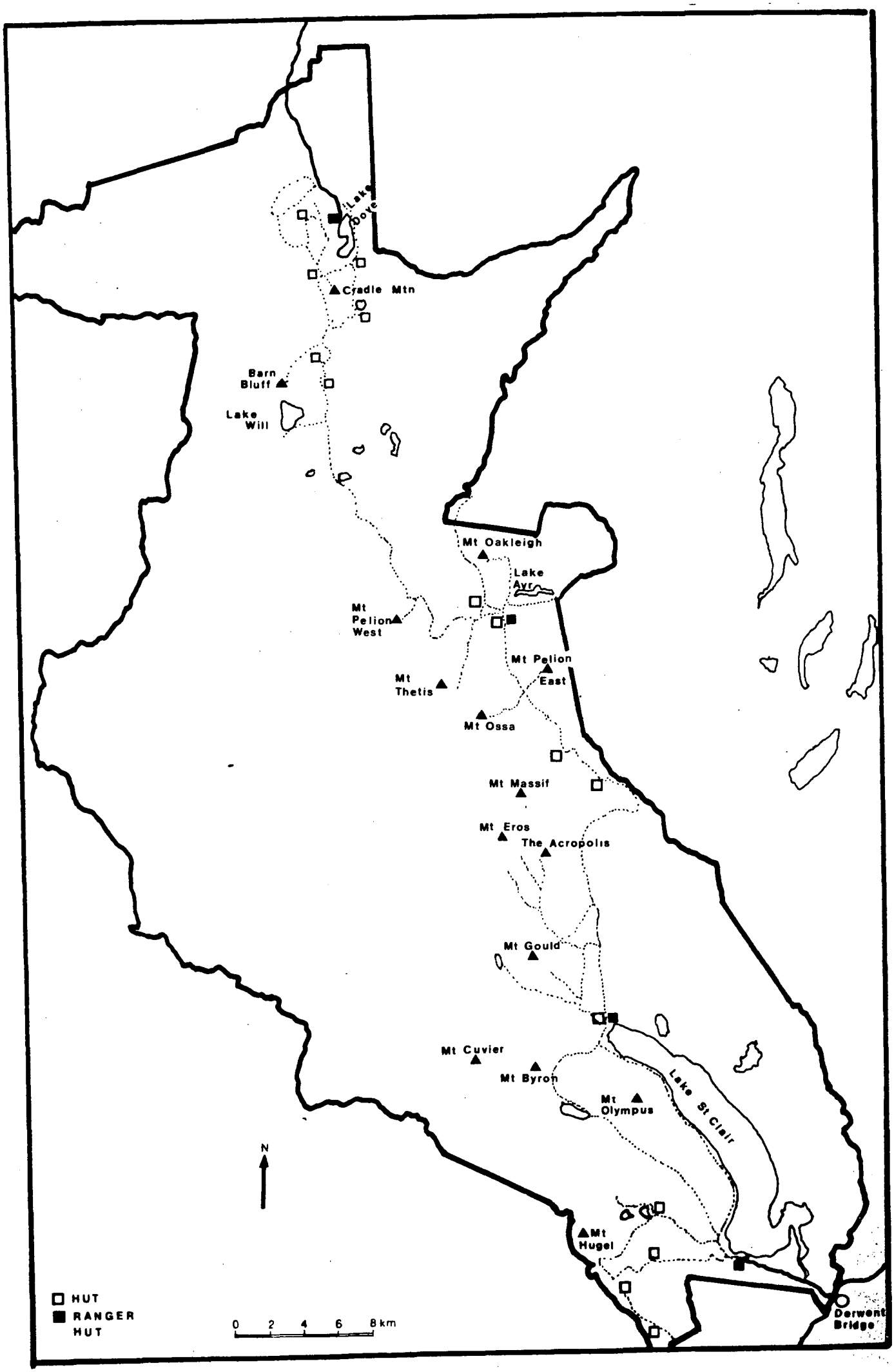
III.2.1. Cradle Mountain - Lake St. Clair:

Cradle Mountain - Lake St. Clair National Park was proclaimed in 1922. Located in the central west of the state approximately 170 kilometres from the state capital, Hobart, it is a park of mountains, tarns and alpine moorlands. The more than 25 peaks within the park's 131 915 hectares include Mount Ossa, Tasmania's highest, at 1617 metres (see Figure 3.1). Lake St. Clair, while having a relatively small surface area, is Australia's deepest lake. One of Tasmania's most popular natural areas, it attracted an estimated 133 000 visitors in 1981-1982 and 129 000 visitors in 1982-1983.

FIGURE 3.1

CRADLE MOUNTAIN - LAKE ST. CLAIR

NATIONAL PARK


Lake Dove
Cradle Mtn
Barn Bluff
Lake Will
Mt Oakleigh
Lake Ayr
Mt Pelion West
Mt Pelion East
Mt Thetis
Mt Ossa
Mt Massif
Mt Eros
The Acropolis
Mt Gould
Mt Cuvier
Mt Byron
Mt Olympus
Lake St Clair
Mt Hugel
Derwent Bridge
N
HUT
RANGER HUT
0 2 4 6 8 km

Use is concentrated at either end of the park with the Lake St. Clair end receiving 70% of the total visitation (TNPWS file M2/1/81). Access to Lake St. Clair is excellent as it is situated on a main tourist highway. It is also the more developed area with such facilities as serviced caravan sites, tent pads, showers, laundry facilities and a shop. In contrast, the Cradle Mountain end of the park has poor access, the final 32 kilometres to the park gate being a narrow, winding, unpaved surface, and offers fewer facilities. High volume use is restricted to either end of the park with fewer than 2% of visitors undertaking the overland track, an 85 km (six to eight day walk) foot track linking the two ends of the park. There are no internal roads within the park which contains significant areas of wilderness (Russell, Matthews and Jones 1979).

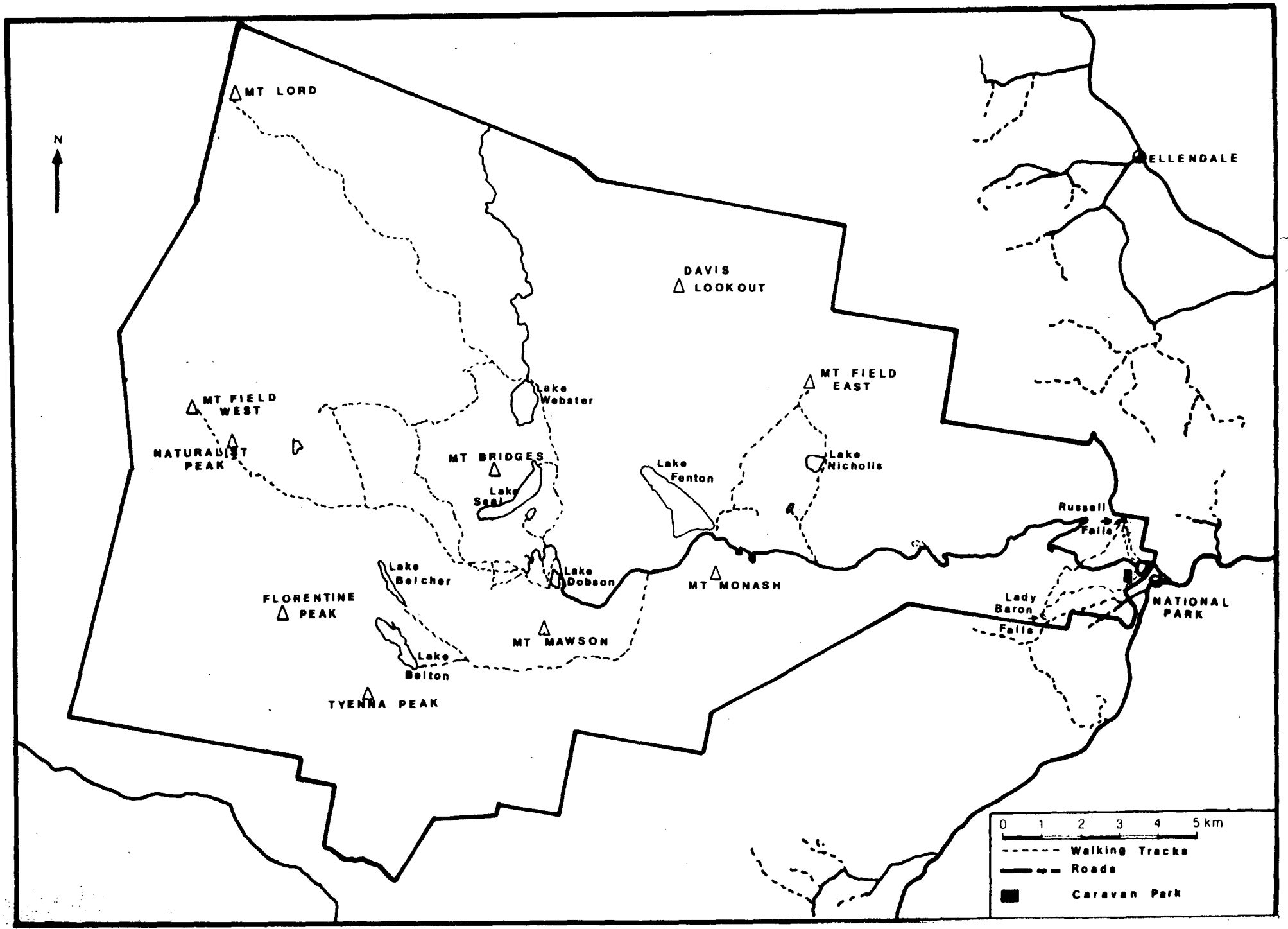
III.2.2. Mount Field:

Mount Field is Tasmania's oldest national park, proclaimed in 1916. Located in the south central part of the state, 75 kilometres from Hobart, it encompasses within its 16 257 hectares environments ranging from relatively dense rainforest, through open eucalypt forest, scrubland, sub-alpine and montane communities (see Figure 3.2). Access to the park is excellent and facilities include a serviced camping area, cabins, laundry facilities and a shop. There is an internal, unsealed road to the base of Mount Mawson,

FIGURE 3.2

MOUNT FIELD

NATIONAL PARK


MT LORD
N
ELLENDALE
DAVIS
LOOKOUT
MT FIELD
EAST
Lake
Webster
MT FIELD
WEST
NATURALIST
PEAK
MT BRIDGES
Lake
Seal
Lake
Fenton
Lake
Nicholls
Russell
Falls
Lake
Belcher
Lake
Dobson
MT MONASH
FLORENTINE
PEAK
Lady
Baron
Falls
NATIONAL
PARK
MT MAWSON
Lake
Belton
TYENNA PEAK
0 1 2 3 4 5 km
Walking Tracks
Roads
Caravan Park

southern Tasmania's only ski resort. A popular four season park, visitation in the year of the study (1982-1983) was estimated at 210 000 (TNPWS file M2/3/81). While the park contains some outstanding natural features, including Russell Falls, its small size, the internal and surrounding roads, and the facilities it contains resulted in it not being included in the 1979 Wilderness in Tasmania study (Russell, pers comm.).

III.2.3. Southwest:

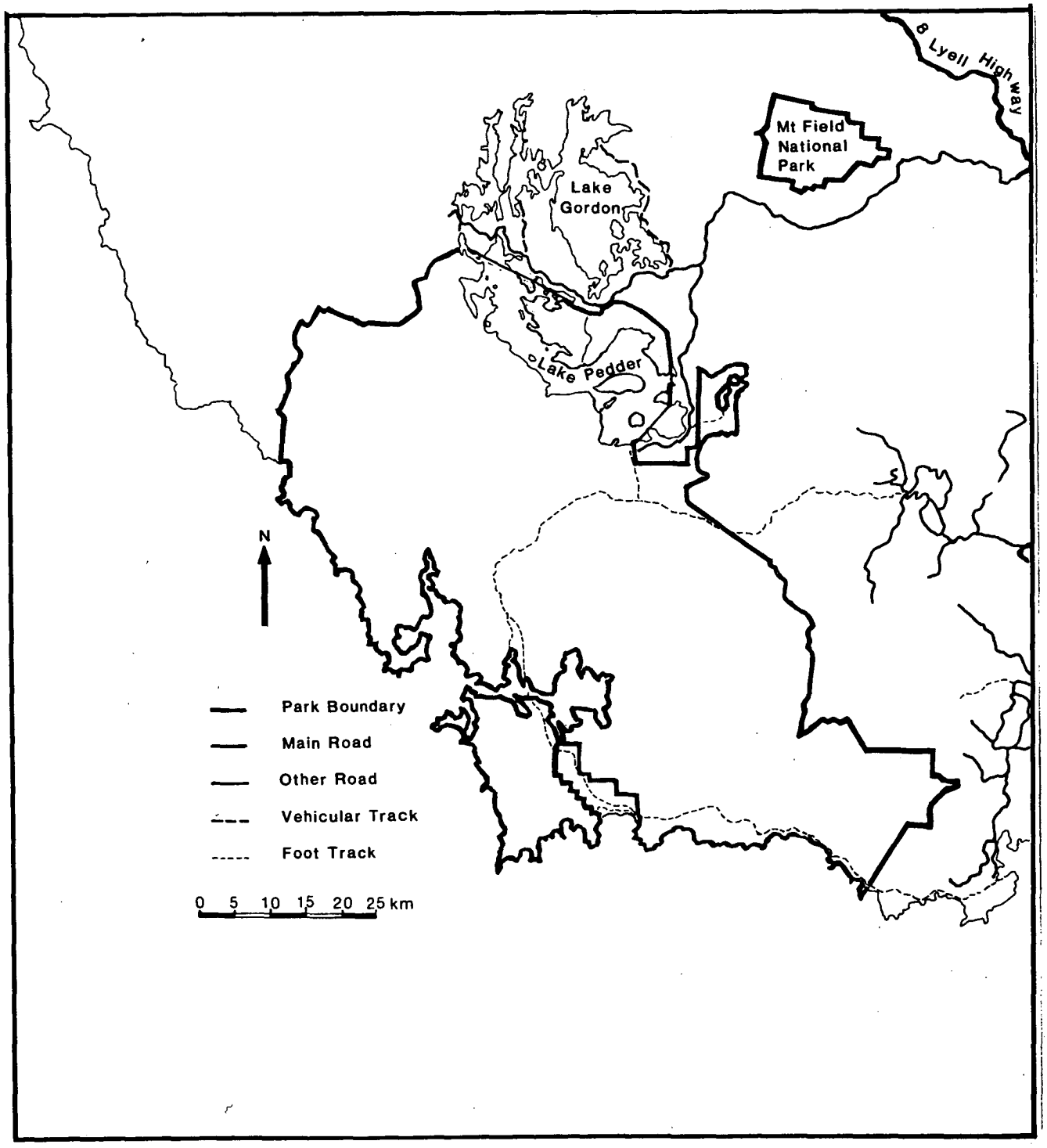
Proclaimed in 1968, the Southwest is Tasmania's largest national park (see Figure 3.3). The park consists of mountainous, rugged ranges and flat to undulating plains, sea cliffs and sandy beaches with vegetation varying from rainforest, to eucalypt forest, scrub and buttongrass moors. The over riding characteristic of this 442 240 hectare park is that of wilderness - parts of which have yet to be explored on foot. Within the park is a core area of some 300 000 hectares in which there are no visible signs of disturbance, no transmission corridors, impoundments or roads. Entry to this core area requires a minimum one day's walk from the nearest road access (Russell, Matthews and Jones 1979).

Due to its size and largely undisturbed nature, this park is considered to be of significant cultural and scientific importance. The committee established to advise the

FIGURE 3.3

THE SOUTHWEST

NATIONAL PARK


8 Lyell Highway
Mt Field National Park
Lake Gordon
Lake Pedder
N
Park Boundary
Main Road
Other Road
Vehicular Track
Foot Track
0 5 10 15 20 25 km

Tasmanian State Government on the management of this area declared in the late 1970s that the conservation area, of which the Southwest National Park is a part, was a unique national asset of world heritage significance (Cartland, Foot and Ogilvie 1978). From a recreational standpoint, it is the most highly regarded bushwalking area in Australia, due to its challenge, scenic grandeur and the tremendous scope for extended walks (two to three weeks) through a great variety of natural environments (Mosley 1970).

Major access to the Southwest is via a road constructed by the Tasmanian Hydro Electric Commission for the building of the Gordon dam. This road is now controlled by the National Parks and Wildlife Service based at Maydena. The majority of visitors to the Southwest pass through the Maydena gate and use is concentrated around the Lake Pedder storage reservoir where facilities include a caravan park, camping area, picnic sites and boat launching ramps. Estimates of total visitation are in the area of 60 000 to 65 000 visitors per year, while estimates, based on logbook entries, of use beyond the immediate Lake Pedder area account for less than 1% of the total (TNPWS file M2/2/81).

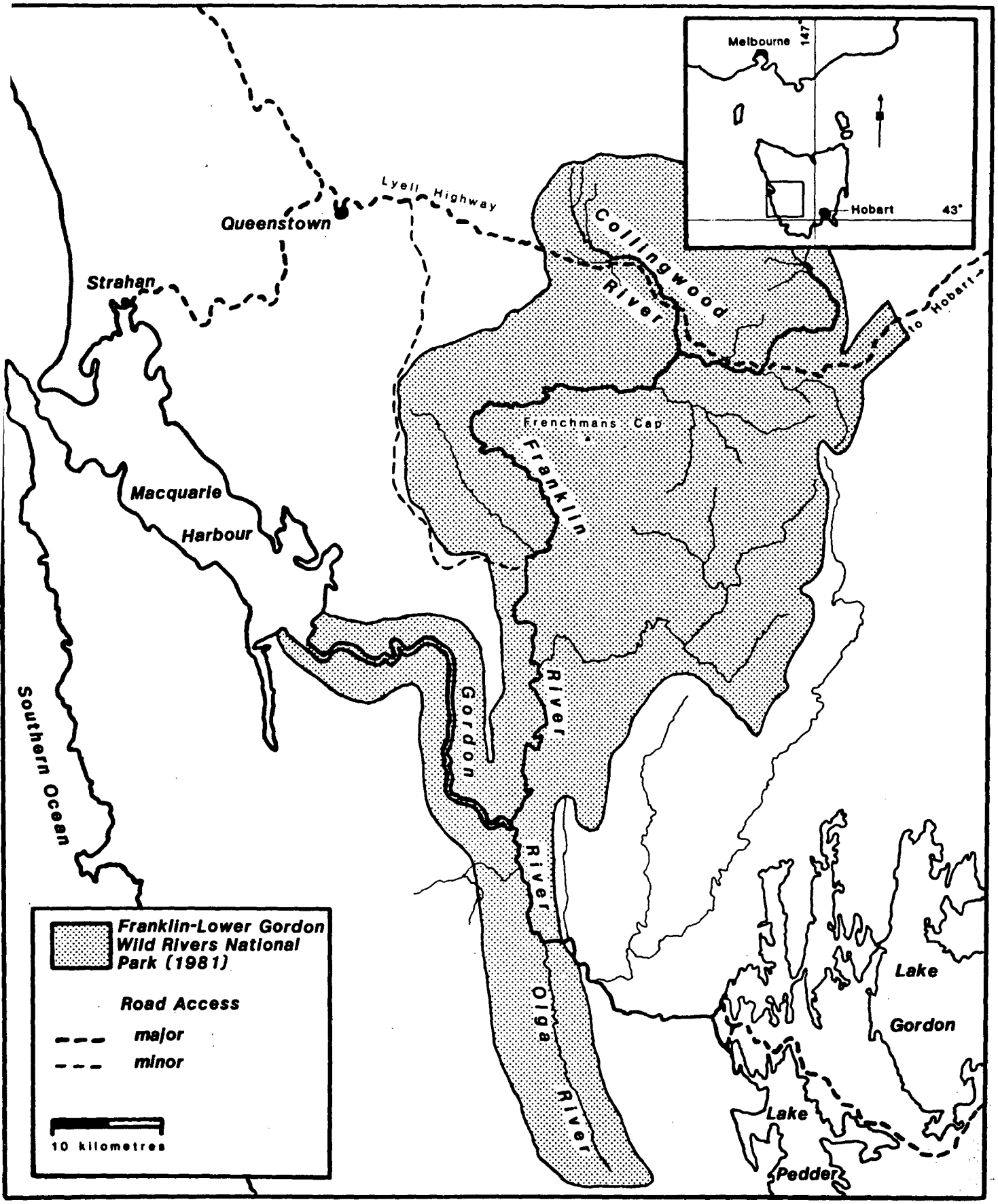
III.2.4. Franklin - Lower Gordon Wild Rivers:

The Franklin - Lower Gordon Wild Rivers National Park lies between, and links, two other parks: the Southwest and Cradle Mountain - Lake St. Clair (see Figure 3.4).

FIGURE 3.4

FRANKLIN - LOWER GORDON WILD RIVERS

NATIONAL PARK


Melbourne
147°
Hobart
43°
Lyell Highway
Queenstown
Strahan
Collingwood River
to Hobart
Frenchmans Cap
Franklin River
Macquarie Harbour
Gordon River
Olga River
Lake Gordon
Lake Pedder
Southern Ocean
Franklin-Lower Gordon Wild Rivers National Park (1981)
Road Access
major
minor
10 kilometres

Proclaimed in April of 1981 and encompassing the watersheds of the Franklin River and the Gordon River below the Olga River, the park occupies some 195 000 hectares of rugged wilderness and near wilderness.

In its 1979 proposal for a wild rivers park, the Tasmanian National Parks and Wildlife Service identified the Franklin - Lower Gordon as the last remaining substantial wild river system in the State. The proposal also claimed that the area "...far surpasses in terms of scenery, isolation and wildness any other river in Australia" (Tasmanian National Parks and Wildlife Service 1979, p.22).

Unlike many other Australian rivers which have sufficient flow for rafting and canoeing only during periods of high water (Helman 1981), the Franklin - Lower Gordon can be rafted only during the months of minimum flow. The winter high water mark in the Great Ravine is some 15 metres above the summer low level, rendering any sort of recreational use impossible. Even during the summer months the river can be dangerously hazardous as rains quickly raise the water level forcing rafting parties to seek high ground. During the 1981-1982 season, one rafter was killed and four others involved in separate incidents requiring helicopter rescue and in 1982-1983 four rafters required helicopter rescue.

Use of the park is highly concentrated, not only in a temporal sense, but also physically. By far the greatest

number of visitors enter the park from the town of Strahan, on Tasmania's west coast. From here, commercial tour boats operate day-tours, across Macquarie Harbour, up the Lower Gordon. In spite of the relatively large numbers of visitors involved (in excess of 70 000 in 1982-1983), impacts on the park were minor as the penetration of these large craft into the park was minimal and no landings were being made. Increased consumer demand and the desire to integrate into existing package tours led operators to invest in larger and much faster craft which resulted in severe undercutting of the banks due to wash effects. By 1985 the extent of the problem was such that the Marine Board imposed a 10 knot speed limit on those sections of the river where the problem was most severe.

The second major use of the park is attributable to bushwalking, mainly in the area of the former Frenchmans Cap National Park now contained within the Wild Rivers National Park. The 1433 metre peak of Frenchmans Cap, with its 300 meter white quartz face, is a popular bushwalk and usage has been steadily increasing. The other major use area consists of the corridor of the Collingwood, Franklin and Lower Gordon Rivers and the portage tracks associated with them.

A small percentage of rafters combine rafting with climbing Frenchmans Cap, caving in the Franklin - Gordon limestone formations, or other daywalks from the river corridor, but the great majority of rafters do not leave the river other

than for overnight camping.

The park has no formal entrance. Access is either by boat from the town of Strahan or from the Lyell Highway which bisects the upper end of the park. There is a minimum of signage which may easily be missed. The usual starting point for rafting the Franklin - Lower Gordon, for example, is the junction of the Lyell Highway and the Collingwood River - the Franklin's first major tributary. Until 1984, the sign indicating that this is the appropriate spot from which to begin the rafting trip was a small metal plaque set in the cement of the bridge embankment which was not visible from the roadway and is surrounded by brush. Facilities within the park are minimal consisting of several walking huts which provide emergency shelter. Other intrusions are the result of investigations by the Hydro Electric Commission and construction work on the access road and worker accommodation for the aborted Lower Gordon dam. The future of these intrusions is yet to be determined.

III.3. Survey Instruments:

In all, four different questionnaire forms were used in this study. Three of these forms were used in 1981-1982 (stage one), and one was used in 1982-1983 (stage two).

III.3.1. Stage One, Phase One: General Information Form:

The general information form had several purposes: the establishment of initial contact with visitors to the study area parks, informing visitors of the general nature of the study, the acquisition of basic data on park users, and the development of a sampling frame for the more detailed attitudinal survey to follow.

As the aim of the study was to compare use and users of the Franklin - Lower Gordon with those of other area parks during the same period, phase one data collection was purposely restricted to the months of December, January, February and March. While use of the Franklin - Lower Gordon River extends beyond these months, the number of individuals attempting a rafting trip outside of these months is very small. In 1981-1982, approximately 90% of the rafting trips were made during this period (Tasmanian National Parks and Wildlife Service file note M2/139/81).

To achieve as wide a distribution as possible during what is normally the season of maximum visitation for Tasmanian parks, it was decided that initial contact could best be made at park entry points. This had several advantages: it did not unnecessarily intrude upon park visitors once they were in the park; as visitors were required to stop to pay the entry fee, distribution of forms at this point ensured maximum coverage; and as this is the season when staffing levels are highest, it took advantage of staff already in place and entailed no additional personnel requirements.

This mode of distribution placed a number of restrictions on the design of the general information form. As the primary responsibility of gate staff was the collection of entry fees, the form had to be independent of the individual distributing it, as there was normally no time for staff to provide explanations or instructions. As respondents normally completed the form on-site, it had to be both brief and as simple as possible to complete. To minimise the time required of the respondent, the form was restricted to a single page with all questions answerable with an (X) and, to keep the form as simple as possible, only questions requesting factual responses were included.

The general information form had three sections: visit characteristics, personal information, and a request for the respondent's name and address to allow further participation. The visit characteristics that were requested were: group size, length of stay, activities participated in, and the number of similar trips made in the past year. Personal particulars were limited to age, sex, marital status, home state and educational level (see Appendix One for sample form).

Three thousand general information forms were distributed at the entry points of the study area parks. The gate houses of Cradle Mountain, Lake St. Clair, Mount Field and the Southwest were each initially supplied with 200 forms in

December (1981). In January, and subsequently at roughly fortnightly intervals (13 days to ensure sampling covered different days of the week), additional forms in units of 100 were distributed to each location and the returned, completed, forms collected. Upon receipt, staff were requested to hand out one form to each of the first 100 people to pass the entry point.

With the exception of the entry to the Southwest (Maydena Gate), which received only 600 forms, all centres received and distributed 800 forms. Fewer forms were distributed at Maydena Gate as the return rate during the early stages of the study was very poor and, as supplies of the general information form were limited, it was decided in the final month of the phase one to concentrate remaining resources in the other centres.

This simple scheme was adopted as it placed minimal demands upon gate staff with other responsibilities. It was believed that a more rigorous and highly structured sampling schedule would have been difficult to establish with inexperienced, casual, staff and that the simple schedule adopted would be adequate for the aims of this phase of the study. As it progressed, it became obvious from the very high proportion of unusable returns (26%) that this procedure was not functioning properly as it was discovered that, in some instances, only one form was being distributed to each entering vehicle and parties were attempting a group

response. This was due to inadequate briefing of staff prior to the study and was largely corrected by mid-January.

The completed forms were collected from the park centres or from the central office of the National Parks and Wildlife Service each fortnight. These forms were then coded, assigned a number, and the names and addresses of those respondents willing to participate further were added to the mailing list for the phase two mail-out questionnaire.

III.3.2. Stage One, Phase One: Rafters Form:

The concern over the rapid growth in the number of individuals floating the Franklin - Lower Gordon River, and the total lack of elementary information about this type of use, led the Tasmanian National Parks and Wildlife Service to consider a user survey directed specifically at rafters during the 1981-1982 season in order to meet its immediate planning needs. The 1981-1982 rafters form therefore functioned in two capacities - as part of the phase one of this study, and as a purpose specific Tasmanian National Parks and Wildlife Service study.

The aims of this phase of the study were: to determine the general characteristics of the rafting population using the Franklin River, to acquire basic details of rafting trips down the river, to assess how adequately visitors felt their

trip preparations were, what problems, difficulties or disturbing elements rafters commonly encountered, to provide an opportunity for rafters to make suggestions for future management of the park, to establish initial contact and develop the sampling frame for phase two of this stage, and to collect background material for the stage two survey of rafters to be conducted the following year (See Appendix 2).

While no firm figures were available on the number of rafters floating the Franklin - Lower Gordon, there was no question that usage was increasing. It was this growth in popularity that contributed to the decision that the area should be provided with increased ranger presence. Due to financial constraints, the first ranger station established during the rafting season of 1981-1982, when the National Parks and Wildlife Service stationed a caravan at the Collingwood bridge, was staffed by volunteers although after the 1983-1984 season, the caravan was replaced by a permanent station manned by NPWS Rangers. The purpose of establishing a staffed centre initially was to both collect and disseminate information - monitoring use of the river and providing advice to those undertaking the trip. The presence, for the first time, of personnel principally concerned with rafting, and the assumption of relatively low numbers of participants contributed to the decision to survey all participants.

It was felt that the level of interest in the park held by rafters would be sufficient to offset the length of the form (30 questions) they were asked to complete on-site. Furthermore, the length of the trip, the number of nights spent camping, and the normal half-day ride on the pick-up craft would give respondents adequate time to complete the form at their leisure. The completed forms were collected by the crews of the commercially operated pick-up craft and forwarded to the National Parks and Wildlife Service. In the same fashion as the general information forms, the rafters' forms were assigned a number, the names of those wishing to participate further were added to the mailing list for phase two, and the forms were coded.

III.3.3. Stage One, Phase Two: Mail-Out Form:

The second phase of stage one consisted of a six page mail-out questionnaire form that was sent to all participants who supplied a name and address in phase one. This form was designed primarily for those who were contacted at parks other than the Franklin - Lower Gordon Wild Rivers National Park. This simplified the form as no questions appropriate only to rafting were included, this area beingcovered by the more lengthy National Parks and Wildlife Service handout. Rafters were requested to complete only one section of this form.

The form was divided into four sections. Part one consisted

of a map of the park where the initial contact was made. Its purpose was to determine the specific area(s) within the park where the respondent spent his/her visit. No map was provided for the rafters as the number of options available to rafters beyond the river corridor is limited. The second part of the form contained nine very generally phrased questions related to the participant's impressions of the setting elements of the environment in which the engagement took place. Part three of the form consisted of twelve general questions relating to the acceptability or desirability of possible future conditions, and modifications to setting elements, as a result of management practice and policy. Finally, part four of the form consisted of 62 psychological outcome scale items. The purpose of this section was to define the outcome profile that the respondent sought through participation and that he/she associated with the activity - setting complex experienced during the visit.

Clark and Stankey (1981) suggest that the attributes defining an outdoor recreation setting can be sorted into three broad categories. These categories of attributes are: those related to the perceived naturalness of the setting, those that reflect likely social interaction (normally expressed in terms of the frequency of probable out-group contacts), and those indicating the degree or extent of on-site management presence. The questions in parts two and three of the mail-out were selected to reflect various

attributes in each of these three categories. Specifically, the questions in part two related to ease of access, signage, apparent naturalness, general condition, level of supplied conveniences, number of interactions in terms of out-group sightings, a value judgement on the number of sightings, and an overall rating. Part three covered essentially the same areas but requested that the respondent indicate a level or degree of ease of access, management presence, and sightings that they felt would be most appropriate. The response format was multiple choice with a range of options presented for each question.

Part four of the form dealt solely with the determination of the outcomes that the respondent associated with the activity - setting complex that he/she experienced and the relative importance assigned to these outcomes. Sixty-two scale items were presented in randomised list form and the respondent requested to indicate the degree to which each possible outcome contributed to, or detracted from, the respondent's satisfaction with the engagement by checking the appropriate box on a nine point scale. The scale extremes were: "very strongly contributed to" and "very strongly detracted from".

The scale items included in part four were selected from Driver's (1977) item pool and from the item pool developed by Haas (1979) in his study of wilderness visitor attitudes. Haas' (1979) survey used 43 items, from an initial 71, that

testing in two prior studies had revealed as most useful in the examination of experiences associated with wilderness use in Colorado. To facilitate possible comparison between the attitudes of north western US wilderness users and those visiting Tasmania's Western Wilderness Parks, all 43 of Haas' items were included in part four. Nineteen additional items were selected from the general pool and included as respondents in this study would include users of relatively developed areas as well as wilderness and a wider range of selected outcomes was thought necessary (see Table 3.1).

As pre-tests of the scale undertaken by Haas were not possible, the expanded list of items was used throughout and items that proved of little use removed during the analysis. The basis for the selection of the additional items was a review of the literature and intuition. The form was pre-tested on individuals from the university community for clarity and readability without any substantial changes resulting (see Appendix Three for sample form).

When the completed general information forms and rafters' forms were returned to either park centres or the National Parks and Wildlife Service central office, they were given an identification number, the names and addresses of those willing to participate further were extracted and the forms coded. At this point, only such information on the rafters' form that was equivalent to that on the general information form was transferred to a coding sheet. The coding of the

TABLE 3.1

OUTCOME DOMAINS AND SCALE ITEMS SELECTED FOR INCLUSION ON THE 1981 - 1983 SURVEY FORMS

DOMAINS	SCALE ITEMS
Relationships with Nature	Enjoying the scenery Experiencing the sights and sounds of nature Being close to nature Being in a natural setting
Escaping Physical Pressure	Experiencing peace and tranquility Getting away from civilization Finding solitude Being away from the noise back home
Escaping Personal / Social Pressure	Giving your mind a rest Getting rid of tension and anxiety Getting away from the demands of other people Having a change from your everyday routine Being alone
Physical Rest	Taking it easy physically
Exercise/ Physical Fitness	Getting exercise Keeping fit and in shape Feeling good after being physically active
Family Togetherness	Doing something with the family Being with another member of the family Having the whole family share an experience
Social Contact	Being with other members of your group Doing things with your companions Being with people who have similar interests Being with your friends
Escaping Family	Getting away from the family for awhile
Leadership / Autonomy	Being your own boss Being obligated to no-one Being free of society's restrictions Sharing your knowledge Teaching your outdoor skills to others Feeling in charge of what's happening
Achievement	Developing your skills and ability Finding out what your capabilities are Accomplishing something Showing others what you can do Being stimulated and excited Using your outdoor skills
Equipment	Using your equipment Comparing your equipment to that of others

CONT'D....

TABLE 3.1 CONT'D

Nostalgia	Having an experience you can look back on
Creativity	Gaining a new perspective and outlook Gaining inspiration
Personal Values	Learning about yourself and who you are Thinking about the future Reflecting on spiritual or higher values Thinking about your personal values
Risk Taking	Taking a few risks Chancing a dangerous situations Feeling a bit frightened Not being sure where you were Facing a challenge Feeling isolated
Security	Being in a predictable situation Avoiding the unknown Having others nearby who could help if needed
Meeting/Observing New People	Having a chance to meet new people Seeing new faces
Learning/Discovery	Discovering something new and different Learning about the outdoors Experiencing the unknown Finding out about new things Having new experiences

more extensive open ended responses was delayed until all returns had been received. Depending upon whether the return was from the Franklin - Lower Gordon or one of the other centres, the appropriate map or covering letter was inserted in the mail-out form and the package sent out accompanied by a business reply envelope. Due to resource limitations, only one mail-out was made and no effort was made to send out reminders.

III.3.4. Stage Two: Rafters' Form:

The final stage of the study was undertaken during the 1982-1983 rafting season and consisted of a single, eight page, self-administered form. It focused entirely on rafters and its purpose was to continue acquiring data on the basic characteristics of the visitor population of the Franklin - Lower Gordon River, to acquire additional detail and information on the nature of the trip down the river from the visitors' point of view, to assess user opinion of conditions, particularly their perception of the social setting experienced on the river, to test user reaction to a range of possible management options aimed at controlling and manipulating the setting elements of the river environment, and finally, to continue the assessment of the psychological outcomes associated with the activity - setting complex experienced by rafters.

The 1982-1983 rafters' form had five sections and sought

both factual and attitudinal data. The first sections (one and two) dealt primarily with factual information related to personal background and trip details, while the latter sections (three through five) addressed attitudes and opinions.

Section one was concerned with the participant's background and included questions on age, previous experience, sex, home state, and information sources used in planning the trip. Section two was directed at the details of the trip itself - duration, party composition, equipment, activities and encounters with other parties. The third section addressed impressions of the setting, primarily its social aspects, and sought user reaction to possible management strategies to control the number of future users as well as reaction to various levels of possible future management presence in terms of both development and on-site regulations. Section four consisted of a wide range of possible management programmes and policies that would affect use of the area.

Sections three and four contained a total of 41 statement items to which the respondents were asked to indicate their agreement or disagreement. These were selected on the basis of suggestions that were made by users the previous season on the stage one rafters' form, the literature, and discussion with National Parks and Wildlife Service personnel.

The final section contained the same 62 outcome scale items used the previous season. All items were retained, as was the order they were presented in, to facilitate inter-year comparison in spite of information from the previous year's analysis indicating that certain items in the listing would be of limited use (see Appendix Four for sample form).

The stage two rafters' form was to have been distributed in a fashion similar to that which had been adopted for the previous year's rafters' form. A caravan was to have been set up at the Collingwood bridge, the usual departure point for Franklin - Lower Gordon River rafting trips, and again staffed by volunteers to distribute forms to all participants departing from that point. The intensity of the social and political conflict that arose over the proposed construction of the hydro dam on the Lower Gordon River prevented the study from going ahead as planned.

The volunteer staff who manned the caravan the previous year were occupied in the protest campaign and the blockade of worksites organized to oppose construction of the dam project. No funds were available to the National Parks and Wildlife Service to pay for additional personnel to staff the Collingwood bridge; the sign indicating that the Collingwood bridge was the starting point for rafting trips was removed, and camping in the area of the Lower Gordon River, where rafters normally awaited the pick-up craft,

prohibited.

These developments necessitated changes to the scheme for distribution of the forms. A small sign was affixed to the logbook box at the Collingwood bridge. This sign requested that all rafters register with their name and address so that they could be contacted for the purposes of the study. A supply of stage two forms was left in the same location and rafters were requested to take one each. To avoid identification with The Wilderness Society or other volunteer groups involved in the protest movement, the forms were printed under the National Parks and Wildlife Service logo. As the Service was perceived as being relatively neutral, it was hoped that this would reduce losses due to vandalism.

Unfortunately, rafters were harassed, the logbook repeatedly vandalised and survey forms destroyed. The metal logbook box was subsequently torn from its concrete base. A total of 800 forms were left in this location but it is not known how many were taken by rafters.

Three hundred forms were also distributed through National Parks and Wildlife Service offices, the principal pick-up craft operating on the Lower Gordon River, and through the mail. Each form had a tear-off strip attached with a

request that the respondent supply his/her name and address to be turned in separately from the form. These strips were then compared with the entries recovered from the logbooks and individuals who had registered but from whom no completed form had been received, were mailed one. Of the 133 forms sent out by mail, 117 (87.9%) were returned.

An estimated 1600 to 1800 rafters travelled down the Franklin - Lower Gordon Rivers in 1982-1983. The 436 completed forms represent a minimum 24% sample of those visitors. Over the two seasons covered by the study, 855 rafters participated and 633 of those participants completed forms which included outcome scale items. This represents an estimated 24% of those who rafted the Franklin - Lower Gordon River during the 1981-1983 period.

III.4. Method of Analysis:

All completed forms were sorted, coded and the data entered onto online storage on the University of Tasmania's Burroughs B6800 computer. Subsequent analysis was carried out using this facility and two software packages - the Statistical Package for the Social Sciences, Release 8 (Nie et al 1981) and Clustan (Wishart 1978). This analysis followed directly from the study aims and proceeded in three areas.

The first area of concern was that of the general characteristics of the visitor sample for each park and of individuals participating in selected activities. The issues addressed at this stage are: Firstly, are the user populations of each park essentially similar on the basis of demographic characteristics i.e. do the parks draw on the same segment of the overall population? Secondly, how are the parks used i.e. what is the summer use pattern? And finally, what are the user characteristics for a number of selected activities within the parks?

The second area of analysis concerned the grouping of the psychological outcome scales into domains and the description of the recreation experiences perceived by the respondents in terms of those outcome domains. It is the fundamental premise of the adopted approach that recreation is an experience that can be described in terms of its outcome profile. It is an emotional, intellectual and psychological response to voluntary participation in activities of choice in a selected environment. This selected recreation environment is a complex situational construct possessing social, physical and managerial characteristics which, in concert, define the opportunity setting in which the individual seeks to participate in order to achieve the sought-after experience. The participant's selection of the activity and setting, from among a range of alternatives, is a cognitive process involving the participant's expectations of the probability

of achieving certain satisfying experiences which he/she associates with the given activity-setting complex, and the relative value that he/she places on their achievement.

The outcome domains are product attributes which, taken in concert, define the recreation experience or product resulting from participation. As the achievement of any particular outcome and its specific importance to any one participant are functions of the activity, the setting and the input of the individual, the product of any participation, which is a profile of a number of domains, will be as unique as that individual. Any given recreation site or activity could conceivably produce as many unique outcome profiles and therefore products as there are individual participants. However, for a given population, while the perceived experience opportunities vary from activity-setting to activity-setting and from individual to individual, the within activity-setting differences are normally less than the between activity-setting differences (Driver and Brown 1978).

It is this predictability and commonality that allows for the generalization, sorting or agglomeration necessary for management purposes, whether that sorting is by individuals, activities, or settings. It is the presumption that settings can be described in terms of the experience opportunities they provide that forms the basis of recreation opportunity planning.

The grouping applied varies with the purpose and a number of approaches have been used. All sampled participants in an activity have been considered as a single group without reference to a specific setting and outcome domains examined: fishing (Moeller and Engelken 1972) and hunting (Potter et al. 1973); participants in a given activity have been grouped on the basis of some aspect of that activity such as the quarry pursued by hunters and inter-activity profiles compared (Hautaluoma and Brown 1979); participants have been considered within a particular activity (river floaters) on the basis of equipment used and valued outcomes compared: rubber rafts or inner tubes (McDonald and Hammitt 1983); comparisons have been made among participants in different activities as part of exploratory work (Driver and Knopf 1977); participants in a single broad activity, in highly variable activity-settings, have been sorted into subgroups on the basis of similarities in outcome profiles (Hautaluoma and Brown 1979); or on the basis of similarities in outcome profiles while participating in various activities within a particular managerially homogeneous area (Brown and Haas 1980).

The wilderness parks of western Tasmania form a management entity and are managed for generally similar purposes. In the broadest sense, the initial question posed is: what are the product attributes of this management entity as perceived by present participants i.e. what experiences are

being enjoyed by visitors as a result of management efforts which have resulted in the availability of the present recreation opportunities? In the perception of users, do each of the park areas present similar experience opportunities?

Within each park, in terms of the recreation opportunity spectrum, the recreation setting characteristics under the control of management tend to vary as a function of distance from the park entry in terms of the variables suggested by the ROS/ROP framework i.e. ease of access, level of development, evidence of human intrusion, likelihood of outgroup contact. While use-corridors do exist, development nodes are in close relative proximity to principal entry gates. Within the total sample there should exist a number of subgroups who will have chosen particular activity-settings in the expectation of deriving certain experiences and the profile of these experiences should differ from activity-setting to activity-setting. In short, if management inputs are recognised and effective, then areas receiving different treatment should be characterised by differences in the outcome profiles of participants, and that relative proximity to visitor centres should serve as a useful discriminator. The exception to this would be the Franklin - Lower Gordon River where the principal variation would be in the social setting, whether it be a commercial or private party.

The final area of analysis concerned the examination of the opinions, attitudes and characteristics of rafters on the Franklin - Lower Gordon River and the relationship between these variables and the importance of the various outcomes to the participant groups.

The first task undertaken was that of the tabulation of descriptive visitor and visit characteristics using the SPSS software. Subroutines "frequencies" and "crosstabs" were applied to the basic demographic data, party size, visit duration and activities engaged in. The sample statistics from each park were then compared with those from each other park and tested for similarity using chi-square. The null hypothesis used in these tests was that the samples were taken from the same population and the testing was done at the .05 level of probability.

To examine activities, seven broad categories of recreation activity types were set up for the purpose of sorting visitors into rough groups on the basis of similarities in likely activities and opportunity settings. These categories were labelled: picnickers, sightseers, daywalkers, campers, bushwalkers, and rafters. The rafters category was further divided on the basis of which season, 1981-1982 or 1982-1983, was involved. While no major difference was anticipated in the activities or settings encountered by rafters, it is a very rapidly growing pastime and the two seasons were kept separate for comparative

purposes.

The categories were defined as follows: all individuals who included picnicking, but not daywalking, among the activities participated in, and who remained in the area for one day or less, were classed as picnickers; sightseers included those visitors whose visit was of one day's duration or less and who indicated that they went sightseeing but who did not daywalk or picnic; daywalkers were defined as all those who went daywalking and whose stay was one day or less; campers included all those who stayed overnight or longer and whose accommodation included campervans, caravans or tents set up in developed camping areas; bushwalkers were those who stayed overnight or longer, went backpacking and either packed in their tents or stayed in backcountry huts; and finally, rafters included anyone who floated the Franklin - Lower Gordon.

"Frequencies" and "crosstabs" subroutines were employed in the analysis of these activity - setting categories in order to develop profiles on their members. Chi-square tests were then made on the class distributions between categories for each of the following variables: age, sex, party size, level of educational attainment, whether it involved a first or repeat visit, and visit duration. The null hypothesis adopted was that each pair of categories possessed the same class distribution for the variable being considered. Finally, the "discriminant" subroutine was used to examine

the usefulness of these variables in predicting the activity - settings of the respondents.

Not all respondents were successfully sorted into one of the above categories as some individuals did not participate in common park activities. Among the returns were forms completed by participants in a memorial service, a working bee and a reunion. A total of 1951 usuable forms were obtained of which 1858 (95%) were placed in one of the above groupings.

The second stage of the analysis was directed towards the establishment of domains of outcomes (groupings of conceptually linked and highly correlated outcome scale items) and the use of these domains to examine and define the experiences associated with participation in each of the previously defined activity settings.

The grouping of the scale items into domains was based primarily on participant response patterns and was undertaken through application of cluster analysis to the outcome scale item scores of all participants (each outcome item was scored in the range +4 to -4 corresponding to "very strongly contributed to" and "very strongly detracted from"). The domains that resulted from the cluster analysis were then modified. Any domain that contained conceptually unrelated items was split so that each domain contained only those outcome items that were both highly correlated and

conceptually linked.

Cluster analysis is a technique for the classification of multi-attribute samples into groups. It accomplishes this by first establishing a similarity matrix for the cases under analysis. The degee of similarity between any two cases being taken as the mathematical distance separating them in the N-dimensional space defined by their measured attributes with cases lying more closely together in this N-dimensional space being considered more similar than those lying further apart. A number of different sorting algorithms can then be applied using these similarity coefficients. In this instance, a hierarchical clustering algorithm based on Ward's Method (Wishart 1978) was used with clusters formed through the fusion of those cases whose fusion results in the least increase in the error sum of squares, defined as the sum of the distances from each individual to the centroid of its parent cluster.

The resulting domains of outcome scale items, modified so that no one domain contained items that were conceptually dissimilar, were then tested for reliability (Cronbach's Alpha) and domains with reliabilities of less than .60 were excluded from further analysis. Of the original 62 outcome scale items, 50 items in 13 domains were retained.

Each participant's domain scores were then calculated as the arithmetic mean of the participant's score on each of the

domain's constituent outcome item scales. The outcome profile for each activity setting was then calculated as the overall means of the participants for each of the 13 domains. An analysis of variance was then undertaken followed by a canonical variate analysis. The SPSS "anova" and "cancorr" subroutines were applied to the domain scores to establish any significant differences among the outcome profiles of those participating in the previously defined activity settings. The null hypothesis was that there should be no significant differences among the domain score profiles on the basis of activity settings.

The final area of analysis was undertaken using the "regression" subroutine to examine the association between the domain scores of those rafting the Franklin - Lower Gordon River and their stance on the various management prescriptions presented in the questionnaire. The "crosstabs" subroutine was also used to examine possible differences in the stance of respondents on the basis of their membership in one of the two major user groups (members of commercially organized, outfitted and led parties of rafters, and private parties).

III.5. Study Limitations:

As is the case with any survey-based work, this study suffers from a number of limitations among which are selection bias due to non-response, self-selection and/or

possible selection bias on the part of those distributing forms. Ideally, for the purposes of this study, a randomised block design using pre-determined activity settings as blocks would have been a preferred starting point. However as much of this project was exploratory in nature only a simple random design was attempted and this was somewhat compromised. In order to achieve as random a selection as possible and reduce possible selection bias on the part of those distributing the forms, rangers were requested to distribute one form to each person entering the park until the supply of forms was exhausted. As the study period was the peak season, the stock of forms supplied on any one day was normally exhausted before noon. The inevitable result is a bias towards those who arrive on-site relatively early in the day. This possible source of error was accepted as a necessary condition of minimising workloads during a particularly busy period.

As a voluntary, self-administered survey, in spite of any efforts to achieve an initial random distribution, an element of self-selection is inevitable. This bias is compounded when the survey involves more than one phase. While it is not possible to examine bias introduced from other sources, a limited study of self-selection bias was possible. Accordingly, in addition to the above three stage analysis was a limited examination of bias arising from non-response.

Regardless of design or brevity, an on-site direct survey is an intrusion; the more so when the would-be participants are in a recreation setting. The value that individuals place on their recreation time might pre-dispose them to reject the survey form outright. The same applies to those with strong views on personal privacy, management presence in national parks, or those who have been repeated participants in other studies. It would also be expected that a small fraction of participants would not possess a level of functional literacy that would enable them to easily or comfortably complete the forms - included here would be non-english speaking migrants. Naturally, no analysis can be undertaken where individuals refused outright to participate or who accepted the phase one survey form but failed to return it.

While the second phase of the survey did not intrude into the participants' on-site experiences, the form itself was lengthly, detailed, and sought views on matters that required some reflection; a form that required some time to complete. A second self-selection process was then likely to have come into play with those with a particular commitment or interest being more likely to expend the required effort leading to a possible over-representation of these individuals.

This over-representation could perhaps have been minimised through the use of follow-up reminders. Reminders were not used in this project for several reasons: human and

financial resources were limited and the necessity to process forms including checking against initial contact dates immediately to ensure timely reminders would have required additional personnel. Moreover, as the period of time between the recreation engagement and the eventual completion of a survey form increased in length, the greater would have been the reliance on recollection and memory, and the greater the possibility of introducing another source of bias. Thus the decision not to employ second and third mail-outs.

Regardless of whether or not the second phase form was completed and returned, all initial participants provided basic personal data which included information on: the park visited, group size, visit duration, whether it was a first or repeat visit, activities participated in, state of residence, age, sex, civil status, and highest level of education completed. In light of the nature of the preliminary data provided, bias resulting from self-selection arising from particular attitudes or factors which might have been explored in the latter stages of analysis can not be explored, however, it is possible to examine differences between those who completed both forms and those who completed only the on-site form in terms of their personal and visit characteristics - the null hypothesis being that there should be no significant difference in any of the characteristics of the first phase sample and its subset, those who completed the second phase

form.

In addition to self-selection bias, the methodology adopted suffers from other limitations. Intended to sample a relatively large number of participants and to produce readily coded data, the questions were not open-ended and participant responses were forced into pre-selected options. In spite of its length, the form was essentially superficial and large areas of participant perception and opinion were necessarily excluded. It must also be recognised that the accuracy of individual response is variable - the factual questions rely solely on respondent honesty; those questions pertaining to opinion and satisfaction rely, not only on honesty, but on a degree of self-awareness and self-consciousness. Moreover, it is a fundamental assumption that the instruments used actually reflect those perceptions and views that are key elements in the experience.

Finally, it must be noted that the activity categories assigned to participants (sightseeing, picnicking, daywalking, developed camping, bushwalking, rafting) tend towards mutual exclusion in one direction only. An individual assigned to the 'daywalker' category, for example, could also have engaged in sightseeing and picnicking but would not have engaged in camping or rafting.

CHAPTER FOUR

VISITOR CHARACTERISTICS

This chapter examines the basic characteristics of those who participated in recreation activities in the study area parks and responded to the phases of the study involving hand-out forms. As it is concerned with general user characteristics, all respondents were included in the analysis regardless of whether or not they participated in the latter phases of the study. The characteristics considered include: age, sex, home state, education, whether this visit was a first or repeat visit, the size of the group participating, the duration of the visit, and the general character of the activity - setting of that participation.

The aims of this chapter are to establish the summer use profiles of the parks in the study area, to identify those aspects of use and users which might serve to characterise each park and broad category of user, to identify the ways in which the use and users of the Franklin - Lower Gordon significantly differ from those of the other study sites, and to examine the differences in the pattern of use and users over the two rafting seasons, 1981-1982 and 1982-1983.

There are two principal sections to this chapter. The first section examines each of the parks and the use and user characteristics associated with them, and the second section examines the characteristics of each broad grouping of users (picnickers, sightseers, daywalkers, campers, bushwalkers and rafters).

IV.1. Use and Users by Park:

For the purposes of this section, Cradle Mountain - Lake St. Clair National Park is considered two distinct parks. This is due to the different conditions of access and development that characterize the two ends of this park, and the fact that the two ends are managed independently.

IV.1.1. Cradle Mountain:

The general use characteristics of Cradle Mountain are outlined in Figure 4.1. Approximately 70% of those entering the park are day visitors and more than 49% of all entrants remain in the park for a half day or less. Fewer than 10% of those visiting Cradle Mountain embark on extended stays of more than three days duration.

The dominance of short-term use, in terms of overall visitor numbers, is reflected in the breakdown of visitors by principal activity category. In descending order of numbers, these categories can be ranked as follows:

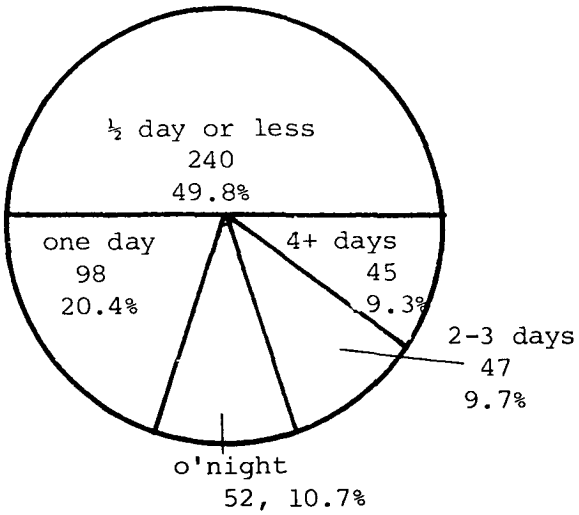
FIGURE 4.1

VISITOR CHARACTERISTICS

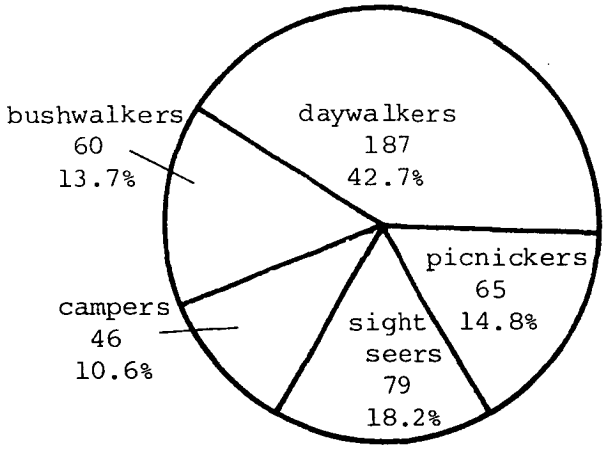
CRADLE MOUNTAIN

1981-1982

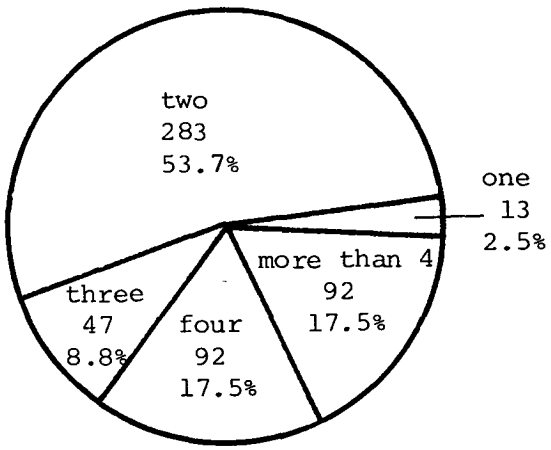
Length of Stay



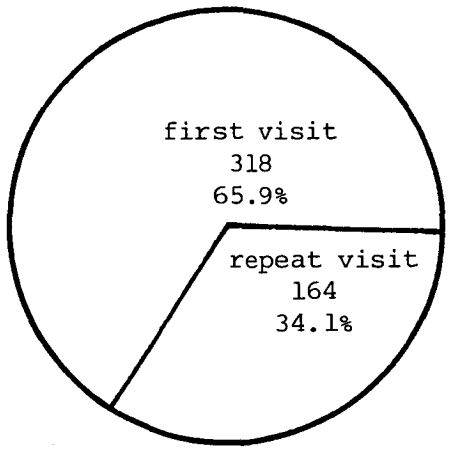
Recreation Type



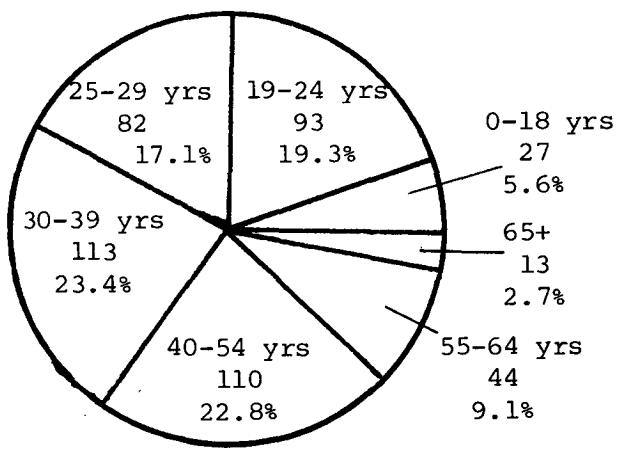
Party Size



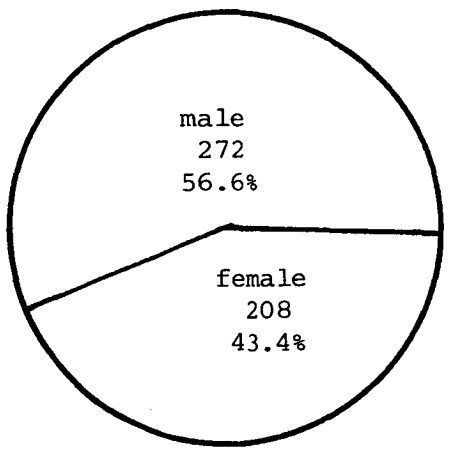
First or Repeat Visit



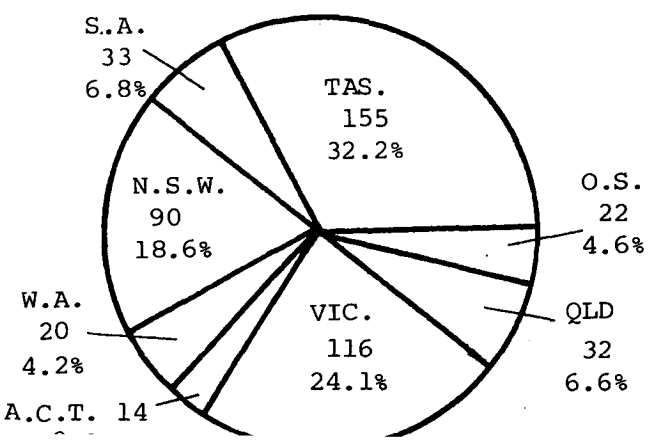
Age



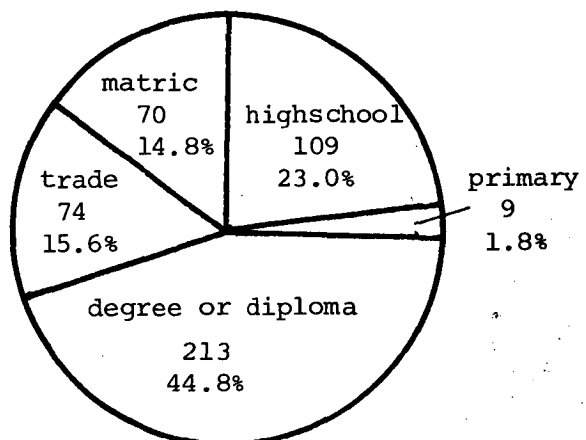
Sex



Home State



Education



daywalkers, sightseers, picnickers, bushwalkers and campers. The first three categories are essentially day-use and account for 75% of user activities. This use is concentrated in the immediate vicinity of the service area and extends to the general limit of walks that could be undertaken in one day.

The majority (65.9%) of those visiting the park are first time entrants and more than half (56.1%) of all visitors arrive in groups of one or two. These visitors are largely tourists from mainland states (63%) with a small component of overseas visitors (4.5%) (see Figure 4.1). Within the visitor sample there was a slight, though non-significant (at the .05 level) bias towards males and a significantly higher standard of education than is found within the Australian population as a whole. Park users tend to be young adults and approximately 60% of the sample fell within the 19 to 39 year age bracket (the weighted average for the seven age classes was 3.76).

IV.1.2. Lake St. Clair:

The use pattern of Lake St. Clair (Figure 4.2) is generally similar to that of Cradle Mountain. Approximately 75% of all entrants are day-users and no significant difference exists between the patterns of day-use, overnight, two- to three-day, and extended stay visits for the two ends of this very large park (Cradle Mountain - Lake St. Clair). A large

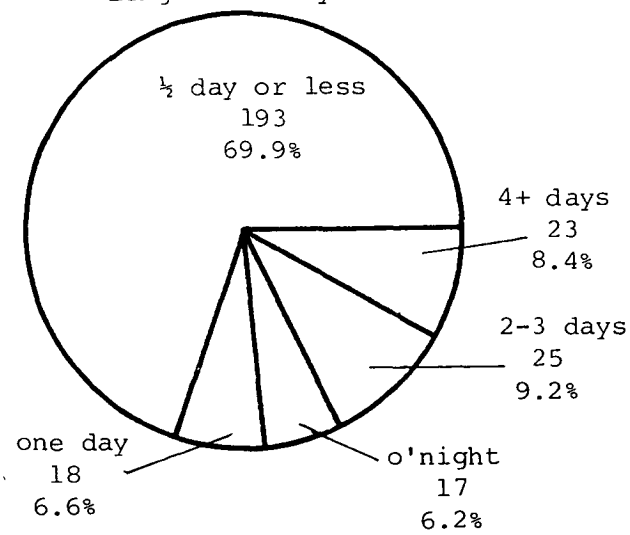
FIGURE 4.2

VISITOR CHARACTERISTICS

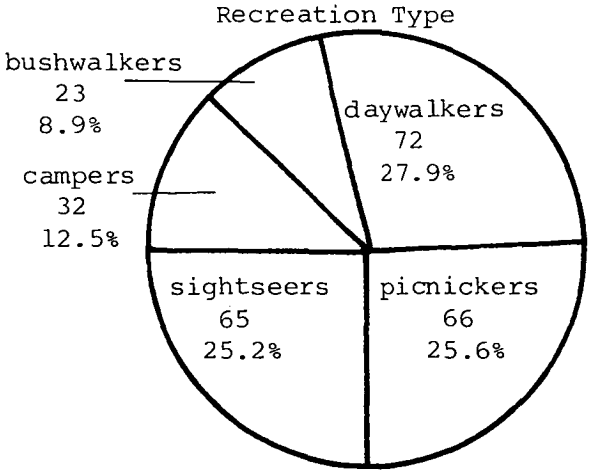
LAKE ST. CLAIR

1981-1982

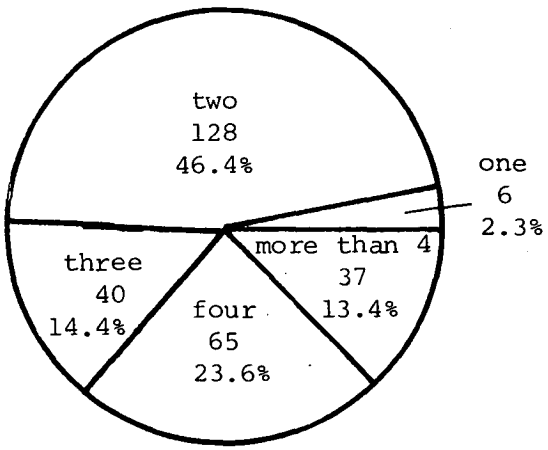
Length of Stay



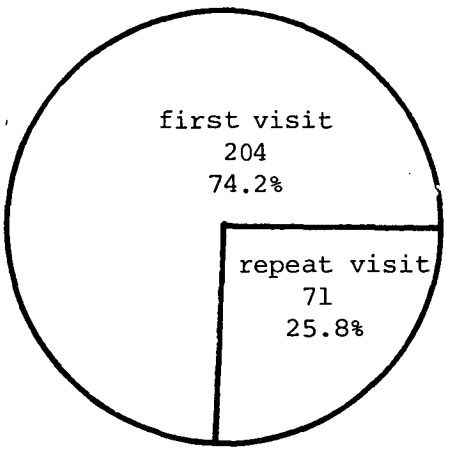
Recreation Type



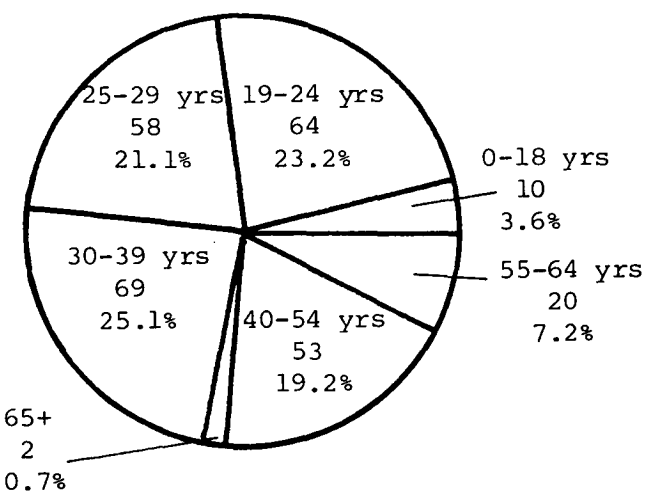
Party Size



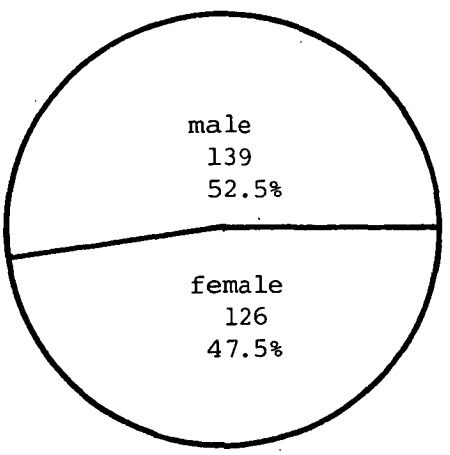
First or Repeat Visit



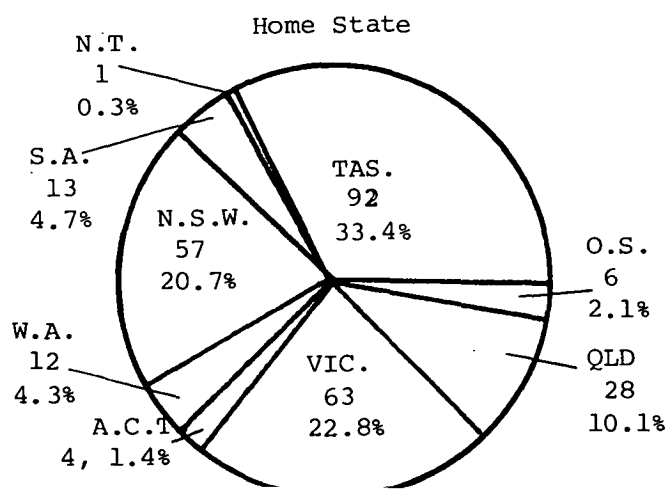
Age



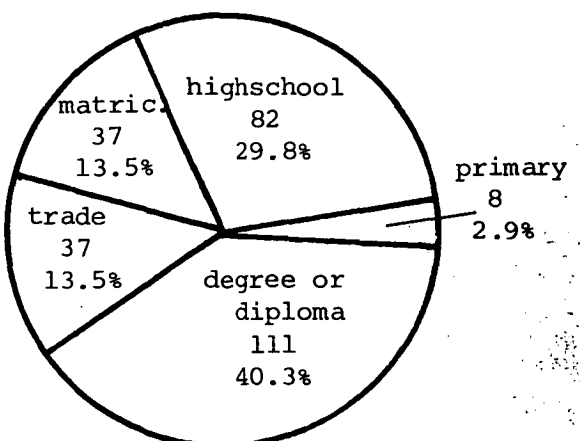
Sex



Home State



Education



and significant difference does occur when the components of the general day-use category are considered; that is, when a comparison is made between full-day and half-day use. At Lake St. Clair, 69.9% of those surveyed remained in the park for half a day or less. The comparable figure for Cradle Mountain was 49.7%.

A possible reason for the preponderance of short term users is the ease of access to Lake St. Clair and its proximity (12 km) to the main highway linking the West Coast of Tasmania to the State Capital, Hobart. Its location along this route makes the park a convenient rest stop for those travelling to both the West and Northwest Coasts. As a result it is popular with those touring the State by car or tourist coach.

The pattern of short term use carries over into the proportions of visitors in each of the activity categories. Sightseeing and picnicking account for 50% of visitor activities. Camping and bushwalking attract the same proportions of total visitors as occurs in Cradle Mountain, but the daywalking category is greatly reduced. The area of concentrated use is much smaller than found in Cradle Mountain as the majority of visitors, being in the park for only a few hours, do not venture far from the car park.

Lake St. Clair appears to be a greater one-time destination than Cradle Mountain. First time visitors account for 74%

of all entrants. This very high percentage, and very short term nature of much of the use combined with the findings of a 1981 tourism study (Tasmanian Department of Tourism 1981) indicating that Lake St. Clair is one of the areas most commonly included in tourist itineraries indicates that for many visitors it is not a destination in itself but rather is an attractive area to briefly visit while touring.

The visitor characteristics for Lake St. Clair show minor differences from those of Cradle Mountain. The sex ratio is more balanced and the level of educational achievement is slightly lower but neither of these differences is significant. The age class distribution of visitors was similar to that of Cradle Mountain although the weighted age class average was slightly lower (3.56).

IV.1.3. Mount Field:

The use pattern of Mount Field (Figure 4.3) differs significantly from those of both Cradle Mountain and Lake St. Clair. The majority of visitors are again day-users, accounting for 63.6% of the surveyed entrants. The proportion of entrants visiting the park for very brief periods (half day or less) parallels that found at Cradle Mountain but is much lower than that of Lake St. Clair. Unlike Lake St. Clair, Mount Field does not serve as a stop-over on any major tourist route. This may contribute to its having a lower percentage of very short-term use.

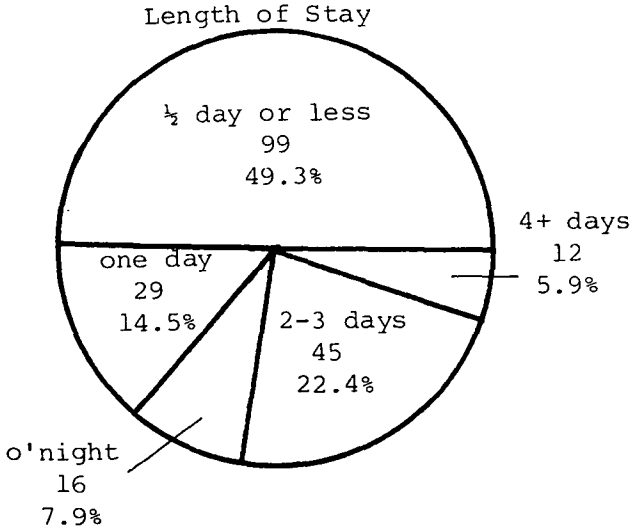
FIGURE 4.3

VISITOR CHARACTERISTICS

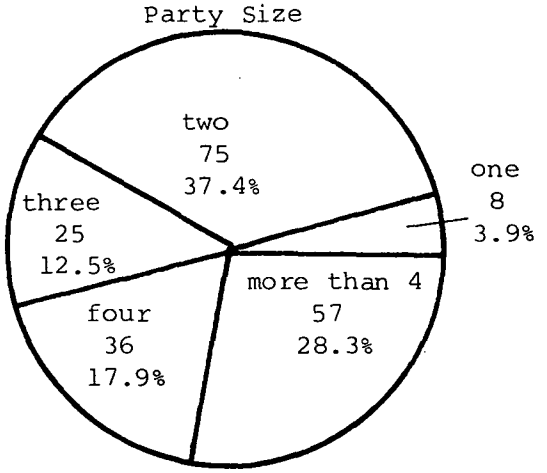
MOUNT FIELD

1981-1982

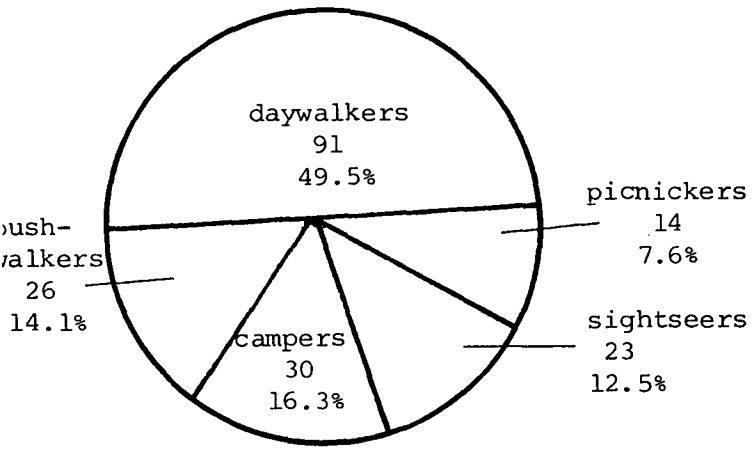
Length of Stay



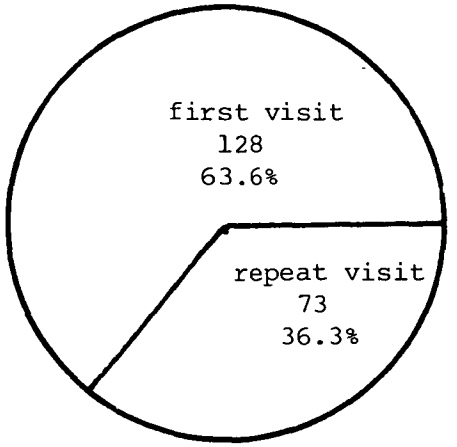
Party Size



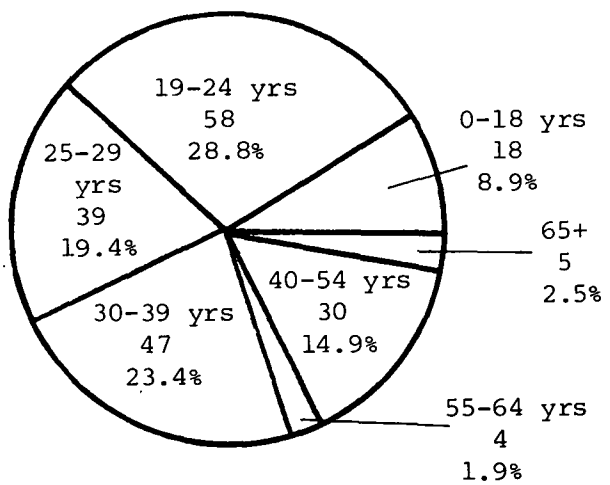
Recreation Type



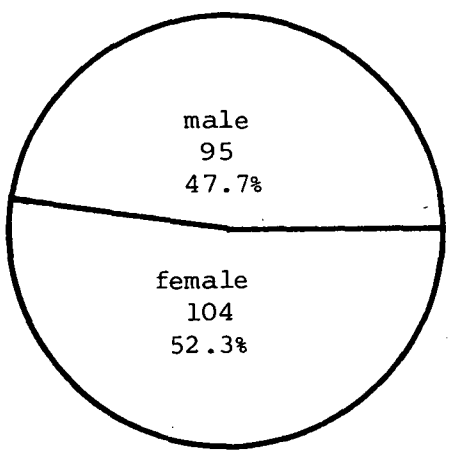
First or Repeat Visit



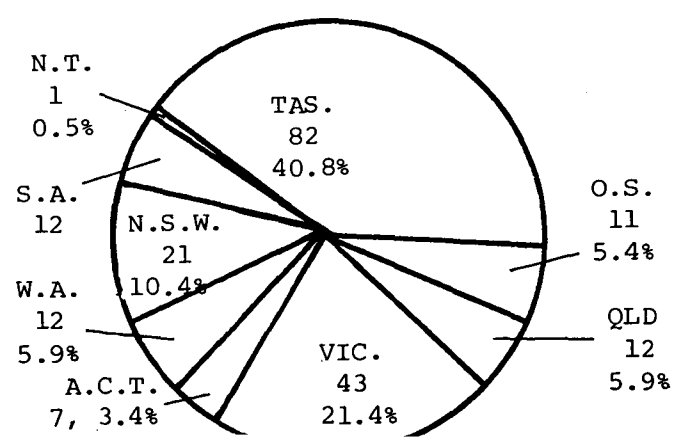
Age



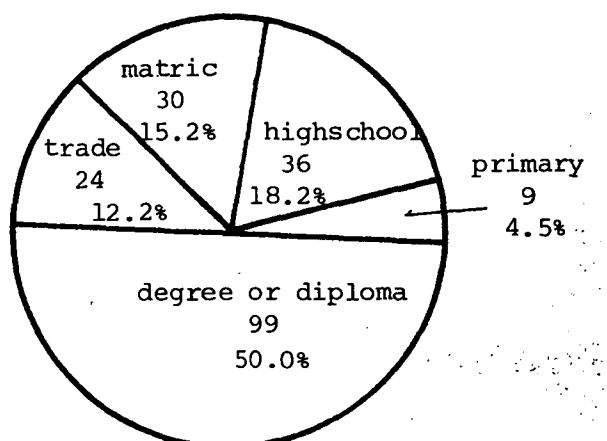
Sex



Home State



Education



The next largest category after daywalking, in terms of visit duration, consists of those remaining in the park for two to three days (22%). This results in a more strongly bi-modal distribution than occurs in either of the previous park areas. Use is concentrated under the categories of day-use and two- to three-day use. Mount Field is an important day-use area, particularly the short, developed track to Russell Falls. There are also numerous walks that can be undertaken in less than three days but its smaller overall size and existing track network offer fewer opportunities for extended backcountry walks than are available from either Lake St. Clair or Cradle Mountain.

The day-use activity categories, sightseeing, picnicking and daywalking, encompass 69.5% of visitors. The breakdown to individual categories is significantly different than is found in the previous park areas. Sightseeing and picnicking occupy fewer individuals than daywalking. This pattern of activity spreads the use of the park over a wider area and places greater emphasis on conditions beyond the immediate visitor service area.

In common with Cradle Mountain, just over 60% of those entering Mount Field are visiting for the first time. Significantly, a greater proportion of parties are in the larger category (more than four persons) with correspondingly fewer two-person parties. The general trend

is for Mount Field to attract larger parties who spend more time in the park engaged in more active pursuits further removed from the access point.

The visitor characteristics of Mount Field reveal that this park has a greater proportion of Tasmanians among its users. It is also the only area from which the female respondents outnumbered the males. This area attracted greater proportions of degree or diploma holders (50%), matriculants (15.1%) and individuals whose highest level of education was primary school (4.5%) than either Cradle Mountain or Lake St. Clair, with lower percentages of tradesmen and highschool graduates. The average age of those visiting this area was fairly low with the largest single age category being that between the ages of 19 and 24 (28.8%) and the age bracket of 19 to 39 years accounting for 71% of all entrants. Mount Field also had the lowest weighted age class average (3.18) as compared with Lake St. Clair (3.56) and Cradle Mountain (3.76).

IV.1.4. Southwest:

Figure 4.4 illustrates the use pattern of those visitors to the Southwest who enter the area through the Maydena Gate. The overall proportion of day-use in this park (59.7%) is significantly lower than in any of the previous areas. The level of full day-use is quite high (22.2%) and the low overall proportion of day-use is due to a significantly

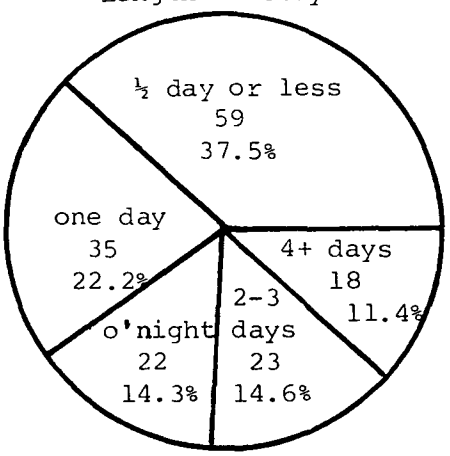
FIGURE 4.4

VISITOR CHARACTERISTICS

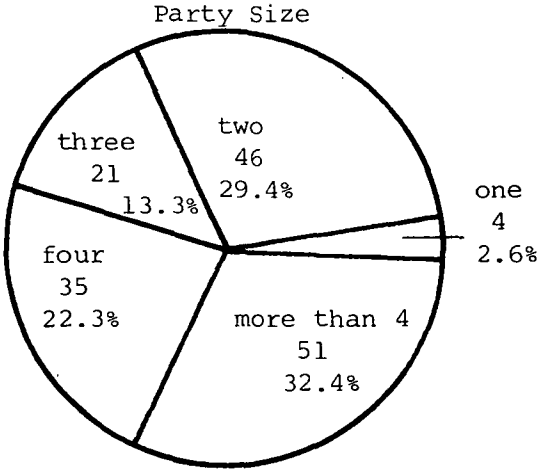
THE SOUTHWEST

1981-1982

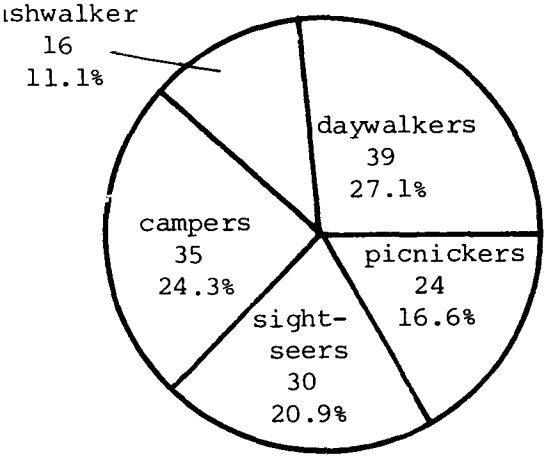
Length of Stay



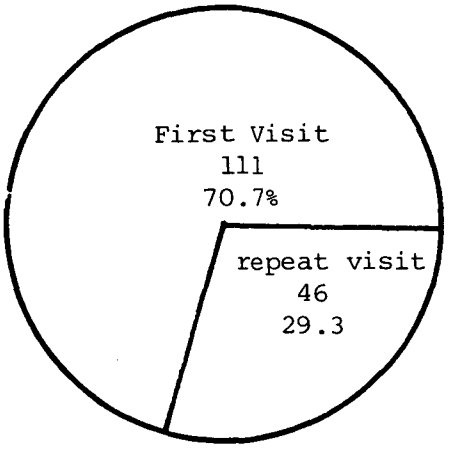
Party Size



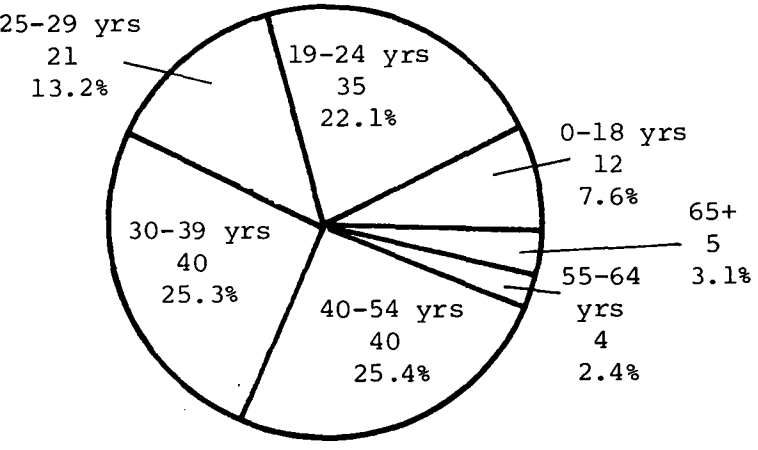
Recreation Type



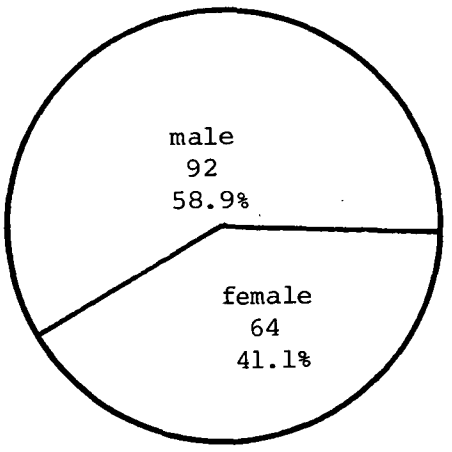
First or Repeat Visit



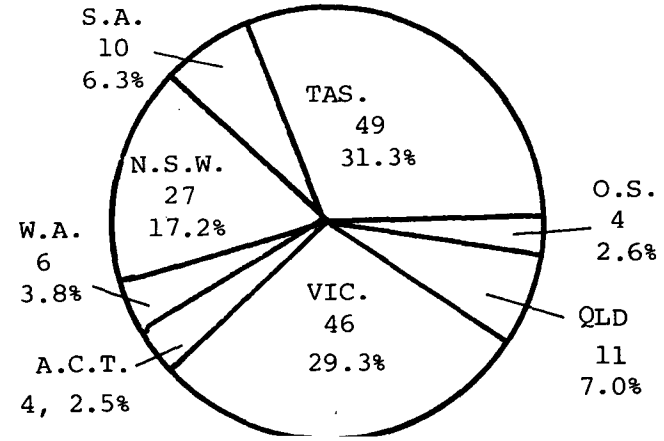
Age



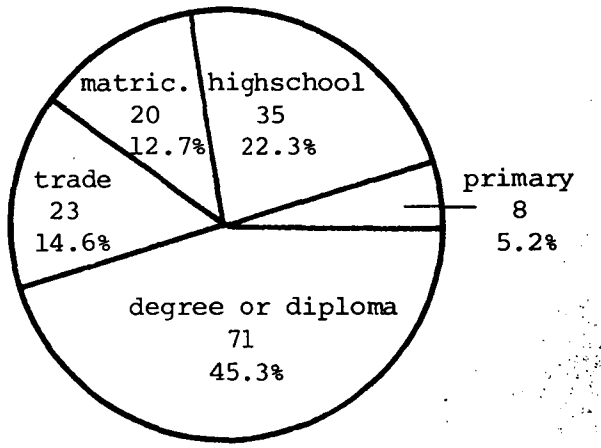
Sex



Home State



Education



reduced level of very short term visits, that is, of half day or less. Beyond day-use, the pattern of visit duration is fairly balanced and shows a relatively even distribution of over-night, two- to three-day and extended stay use, similar to that of Cradle Mountain although of slightly higher proportions (not significant at .05).

The use profile of the area reflects the relatively high proportion of visitors remaining in the area for more than one day. However, in spite of the Southwest being the largest wilderness area in the state, the use profile reveals that only a small proportion (11.1%) of users venture beyond the immediate vicinity of the hydro impoundments of Lakes Pedder and Gordon. A large proportion of entrants (24.3%) camp in the area, but their accommodation type requires developed access. Short term visitors (sightseers and picnickers) outnumber daywalkers and this type of use is highly concentrated around the road access points to the impoundments and the dams themselves.

The percentage of first time visitors is high and Lakes Pedder and Gordon with their associated hydro works are popular with organised tours as are cruises on Lake Pedder itself. Unlike Lake St. Clair, the access road to the Southwest is not on a major route to any other part of the state and therefore it does not attract the same high volume of short term use. The Southwest is the only popular day-use area where the most common party size was that of

four or more individuals.

The visitor characteristics for the Southwest are similar to those of the other major day-use areas. The majority of users are non-Tasmanian (68.8%) and well educated. The proportion of males (58.9%) is quite high but this may be a reflection of the popularity of this area for trout fishing. The age distribution, while differing from that of Lake St. Clair and Mount Field, is similar to that for Cradle Mountain.

IV.1.5. Franklin - Lower Gordon:

The pattern of use for the Franklin - Lower Gordon over the two seasons of the study (Figure 4.5) differs markedly from that of the other study areas. A principal reason for this difference is that there is no day-use of the river originating from the upper end of the park. The study coverage of the area, in the absence of a formal entrance gate, was limited to the access point on the Collingwood River, hence the only activity group encountered was rafters.

The very small proportion of respondents who indicated a stay of three days or less represent those who encountered difficulties and were forced to walk out of the area, abandoning the trip. The number of individuals reporting trip durations of three days or less was 1.6% of the 835

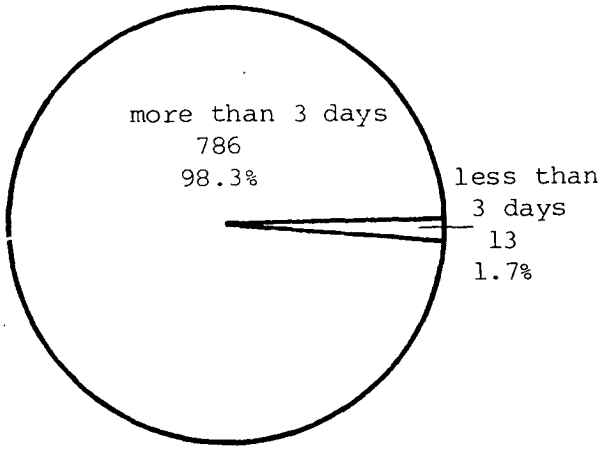
FIGURE 4.5

VISITOR CHARACTERISTICS

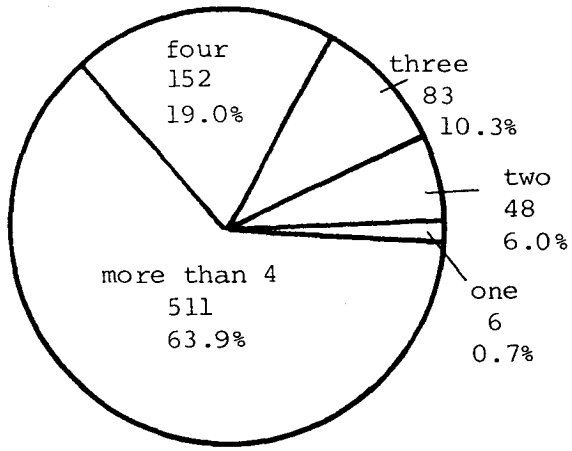
FRANKLIN - LOWER GORDON WILD RIVERS

1981-1982, 1982-1983

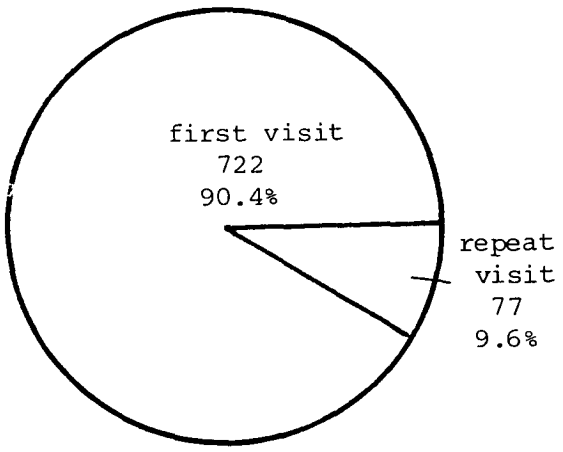
Length of Stay



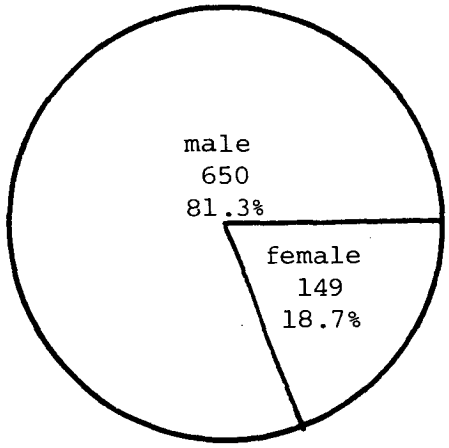
Party Size



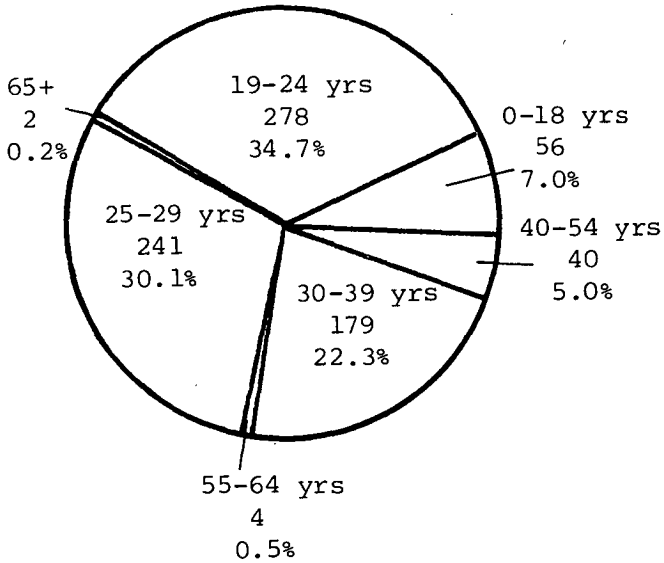
First or Repeat Visit



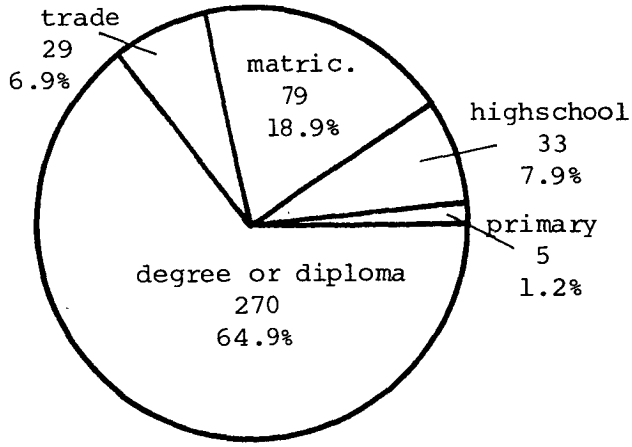
Sex



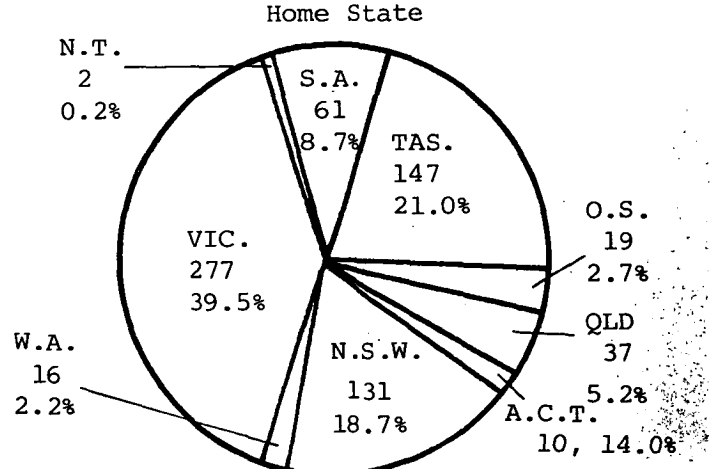
Age



Education ('82-'83 only)



Home State



respondents. This is likely to be an underestimate as those who did encounter difficulties would have been less likely to complete and return the survey form.

The recreational use of the river, particularly for white water adventuring, is relatively recent and is growing rapidly in popularity. As a consequence, very few of those floating the river have done so before. Over the two seasons of the study 10% of those on the river had floated the Franklin previously. This is a far lower percentage of "experienced" visitors than is to be found in any other major Tasmanian park.

Group size was markedly different from that of other areas. A difficult and sometimes hazardous trip, small groups are the exception with groups of four or more accounting for approximately 82% of all entrants.

The differences in the pattern of use for this area as compared with the other parks in the study is due to its being, at this time, a virtually single use park, that use being for extended wilderness rafting, kayaking or canoeing trips. There are no facilities within the park to encourage day-use even on its periphery. The cruise boat service provided by commercial operators on the bottom end of the Lower Gordon River is the only significant short term use of the park and it operates independent of National Parks and Wildlife Service control.

The Franklin - Lower Gordon River attracted the highest proportion of out of state visitors of any of the study areas. In 1981-82, Tasmanians accounted for 27.1% of all entrants. In 1982-83, this had dropped to 10.8%. The absolute number of Tasmamians on the river may not have changed from the previous year as estimates of total use doubled and the extraordinary level of media exposure due to the dam controversy resulted in the largest growth of visitation being from those states where the anti-dam campaign was most active (New South Wales and Victoria).

Rafting the Franklin - Lower Gordon River has been a male dominated activity since it was first accomplished in the 1950s. This remains the case as more than 81% of those surveyed were male. Those with higher education are equally over-represented. The education level for rafters is extremely high with 65% of all rafters possessing either a degree or a diploma (this figure applies only to the 1982-83 season as the question relating to education level attained was not included in the 1981-82 survey).

The users of the Franklin - Lower Gordon River were uniformly young adults with the largest numbers being in the 19 to 24 age class and the age bracket of 19 to 39 years accounting for 87% of all users.

IV.2. Discussion:

In general, those who visited the national parks in the study area tended to be professionals or other very well educated individuals when compared to the population as a whole with approximately 50% of those surveyed possessing either degrees or diplomas. The great majority (74%) were young adults between the ages of 19 and 39 years. Most (66%) were tourists from outside the state and the majority (68%) had never previously visited the area in which they were contacted. With the exception of the Franklin - Lower Gordon River, there were roughly as many male as female respondents (54:46) and they normally arrived either in pairs (43%) or in groups of four or more (41.2%). Excepting rafters, most visits were of one day's duration or less (70%) with fewer than eight percent of all entrants staying for three or more days.

Some of the variation among the parks is a reflection of the range of conditions of access, facilities, development and management of the areas. Lake St. Clair, for example, is the most accessible of the areas and lies on a major tourist route. Cradle Mountain is the reverse, having very poor access. While it is not far from the northern Tasmanian towns of Devonport and Burnie, the final 32 kilometres to the park are covered by a narrow, twisting, unsealed road. It is undeveloped and has few facilities. Mount Field has access and facilities comparable to Lake St. Clair, but is

not on a major tourist route. The Southwest has fair access and a range of facilities but is the most distant from any population centre.

The Franklin - Lower Gordon River sample was significantly different from those of the other areas in all respects although this was due to the sample being collected from the one entry point used almost exclusively by rafters and its present character as a highly specialised, single-use area. Due to its location, all road traffic to the State's West Coast must pass through the park but the only indication that the highway is within the national park is a boundary sign. There are no genuine opportunities for visitors to stop along the route and learn something of the area and many would be unaware that they were indeed in a park. Also excluded from the sample were the thousands of day visitors who tour the lower reaches of the Gordon River on cruising vessels as these operators are independent of National Parks and Wildlife Service control.

The greatest differences among the parks was in terms of visit duration. Lake St. Clair, with its easy access and its tourist route location, was predominantly a short term use park. The great majority (74%) of its visitors were first time tourists who entered the park, had a quick look around the visitor service area and remained in the park for a half day or less (70%). Although the largest categories of visitors to Cradle Mountain and Mount Field were also

half day users, they were less dominant (49% each) than at Lake St. Clair. More individuals remained for full day visits and many more were involved in daywalking in addition to those who were sightseeing or picnicking. The Southwest, the most distant from any major population centre or major road, had the lowest proportion of half day visitors (37%) and the highest proportion of full day, overnight, two- to three-day and longer than three day visitors.

Differences also were found in the distribution of park visitors among the activity - setting categories. Lake St. Clair, with its very high proportion of short-term visitors, revealed almost equal numbers of picnickers, sightseers and daywalkers, which together accounted for approximately 75% of its visitors. In Cradle Mountain, the overall total of these day-use categories was similar but the distribution strongly favored daywalking, and in Mount Field, while the total day-use category was reduced to approximately 70%, the proportion of daywalkers climbed to 49%. The Southwest had a similar percentage of daywalkers as did Lake St. Clair, but higher proportions of its visitors were involved in developed camping.

All of the parks, with the exception of the Franklin - Lower Gordon River, are primarily day-use areas in terms of gross visitor numbers. Lake St. Clair attracts very short term use; visitors who stop briefly, sightsee and leave. Cradle Mountain and Mount Field also attract the short duration

visit, but are also popular with individuals who remain for longer periods and are more active within the park. The Southwest had the second highest proportion of sightseers, many of whom visit specifically to see Lakes Pedder and Gordon (the largest man-made impoundments in Australia), but also had the highest proportion of campers, attracting both short-term and long-term users.

The principal feature of the wilderness parks, Cradle Mountain - Lake St. Clair, the Southwest and the Franklin - Lower Gordon River is their wilderness nature. The great majority of visitors to these parks, unfortunately, are provided with little assistance in appreciating this and the pattern of use reveals that the vast majority of visitors remain within the park boundaries for such short periods as to have only a fleeting impression of what can be seen of the areas from the roadside, the carpark and the picnic area.

A very small segment of the user population is well served. The large area of wilderness and minimal management presence is ideally suited to the minority of park visitors who are self-contained and self-sufficient and are both seeking primitive recreation and physically capable of enjoying it. For less hardy visitors, the parks apparently offer few opportunities, for very large numbers of people remain for less than half a day. There are virtually no interpretive facilities and the only regularly scheduled talk that

visitors are exposed to is the one given by the commercial operators of the Lower Gordon River cruises. Those who do remain for longer periods tend to use the developed camping facilities strictly for overnight use; brief stopovers on a car-based driving tour of the State.

IV.3. User Characteristics by Activity Setting:

This section examines the general characteristics of the participants in each of the broad activity - setting categories previously established (sightseeing, picnicking, developed camping, daywalking, bushwalking and rafting). These categories can be arrayed in a rough continuum or spectrum that generally reflects the opportunity settings in which they occur. The basis for this activity - setting continuum is the proximity of the locus of participation to the visitor service area, where one exists. Sightseeing and picnicking, for example, normally take place within the immediate vicinity of the visitor service area unless they are part of a more extended visit; daywalking extends to the maximum radius of one day's walk from the nearest vehicle access; developed camping may be limited to the vicinity of the visitor service area, or it may serve as a base for extended daywalks; bushwalking can occupy the more isolated interior of the parks; and finally, rafting the Franklin - Lower Gordon involves an extended trip into an extremely isolated area where even foot access is difficult.

It should be noted that these categories are artificial and contain a certain degree of potential overlap. For example, of those considered 'daywalkers', 42% either picnicked or had a barbeque while in the park, and 83% included sightseeing among their activities. In the case of 'bushwalkers' the figures were 11% and 57% respectively; 80% of 'campers' also engaged in daywalks of some sort. In spite of this, the categories do establish the maximum degree of primitiveness likely to have been encountered.

The pattern of use, development and management practice in the study area parks result in the distance travelled into the park being inversely proportional to the six factors suggested by Clark and Stankey (1979) for use in defining, from a managerial standpoint, the opportunity setting. These factors consist of the conditions of access, the compatibility of non-recreational resource use within the site (not applicable to national park areas), the level of management activity and presence, the likely level of social interaction in terms of out-group contacts, the level and acceptability of visitor impact, and the level of regimentation imposed on visitors.

The activity - setting categories, defined in terms of where, in relation to visitor services, a participant is likely to have been on the basis of activities participated in and the duration of the visit, can therefore be used as

rough indicators of the opportunity setting encountered. An examination of the characteristics of the individuals in each of these categories may therefore provide some insight into the likely users of the various opportunity settings these categories are associated with. The variables considered in this section include: the duration of the visit, the size of the party, whether it was a first or a repeat visit, the sex of the participant, and the level of education completed.

IV.3.1. Sightseeing:

All individuals who indicated that sightseeing was one of the activities they engaged in, who did not picnic or daywalk, and whose visit was of one day's duration or less, were entered into this activity - setting category. Of the 1858 classified respondents, 197 were considered sightseers for the purposes of this section. Figure 4.6 presents the general distribution of these respondents over the variables considered.

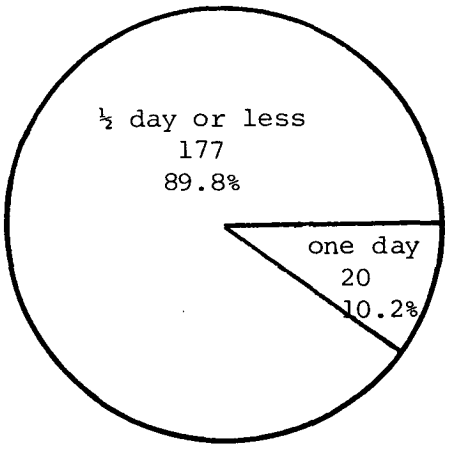
While one of the selection criteria for this category was a visit duration of one day or less, approximately 90% of those classed as sightseers had visits of a half day or less. This very high proportion of short duration visits was slightly higher (not significant at .05) than that recorded for picnickers (84%) and significantly higher than the corresponding figure for the remaining day use category,

FIGURE 4.6

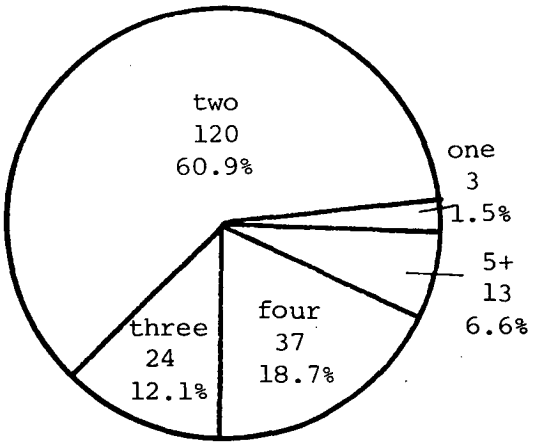
PARTICIPANT CHARACTERISTICS

'SIGHTSEERS'

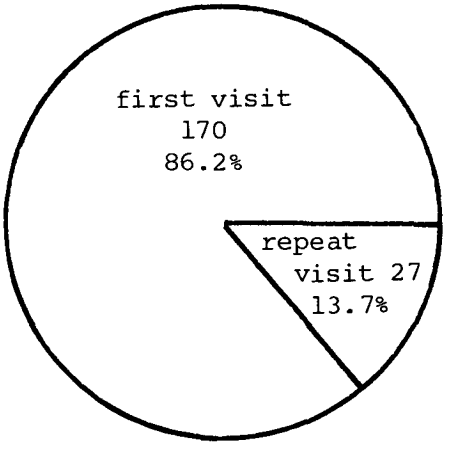
Length of Stay



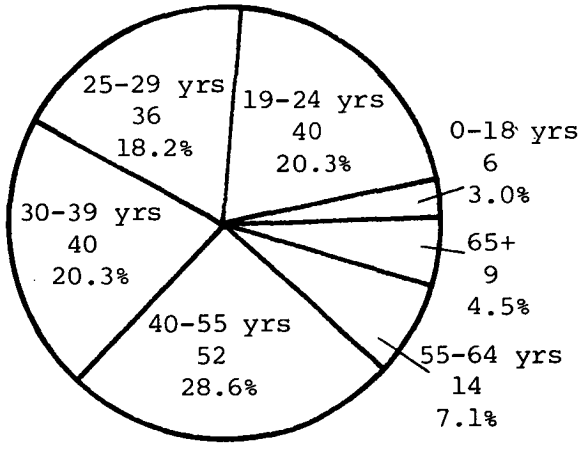
Party Size



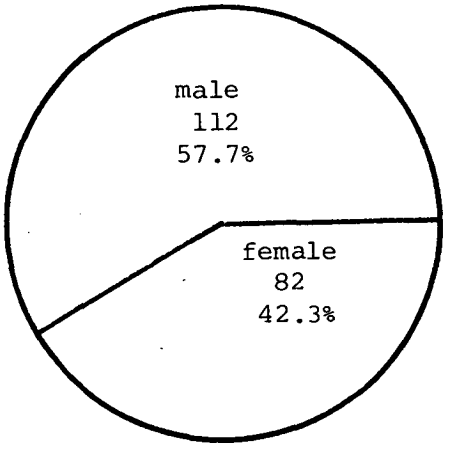
First or Repeat Visit



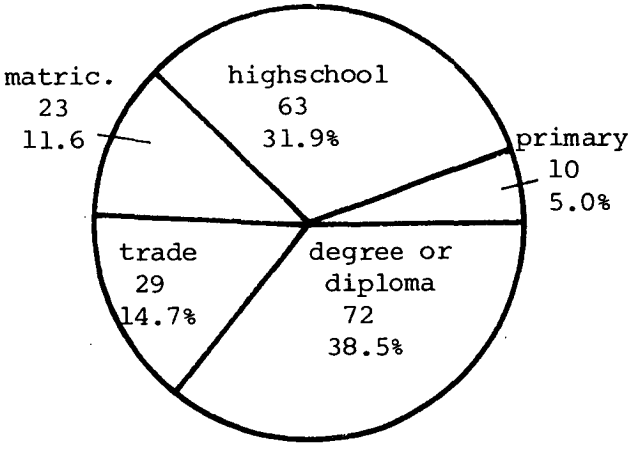
Age



Sex



Education



daywalking, where 67% remained in the park area for a half day or less.

Sightseers most commonly arrived on site in parties of two. Fully 60.9% of those labelled as sightseers entered the study areas in couples or pairs. The next most frequently listed group size was the four-person party (18.8%) and together they accounted for almost 80% of those in this category. The distribution among the five party size classes (one, two, three, four, four+) was significantly different from those of the other categories and the large majority of two person parties accounted for sightseers having the smallest average party size (weighted average 2.68) of any of the groups studied.

A very large proportion of sightseers in the study areas (86.3%) were visiting for the first time. Those who went rafting during the 1981-1982 season showed a similar proportion of first-timers (87.5%) although the 1982-1983 season saw an increase in the percentage of first-timers on the Franklin - Lower Gordon to the level of 93%.

One of the least active of the categories, sightseers tended to be older than those in the other categories. Seven age classes were used in the study [(1) under 19, (2) 19-24, (3) 25-29, (4) 30-39, (5) 40-54, (6) 55-64, (7) 65+] and the largest single class was the 40 to 54 year olds, with 26.4% of the respondents falling within its limits. The sightseer

category was the only group to have this age class as its mode and also had the greatest representation in the higher age classes as well with 38% being forty years of age or older. The distribution of sightseers among the age classes was not significantly different from that of the picnicker category, but the heavier representation of sightseers among the more advanced age classes resulted in the the sightseer category having the highest age class average (3.86).

The education level of all of those surveyed in the study areas was well above the national average. In excess of 36% of sightseers possessed a degree or diploma while 26.4% had completed matriculation or had acquired trade qualifications. In spite of this high level of educational attainment, sightseers and picnickers together were the least well educated of the groups in the study.

IV.3.2. Picnicking:

Picnickers included all those individuals who indicated picnicking as one of the activities in which they participated, but who did not daywalk or remain in the park for more than one day. A total of 196 respondents were included in this activity - setting category. Figure 4.7 illustrates the distribution of these respondents over the variables of visit duration, party size, first or repeat visit, age class, sex and education.

Picnickers were predominantly short term visitors with 84% of those in this category remaining on-site for half a day or less. In this respect they were very similar to sightseers and no significant difference was found between these two groups in terms of visit duration.

There were additional similarities (no significant difference at the .05 level) between these categories in the distribution of their members among age classes and levels of educational attainment. The weighted average for age class distribution of picnickers was 3.80 while that for sightseers was a slightly higher 3.86. In terms of education, picnickers were the least well educated of the groups studied. Only 27% of those in this category possessed degrees or diplomas compared with the 50% figure for study participants in general.

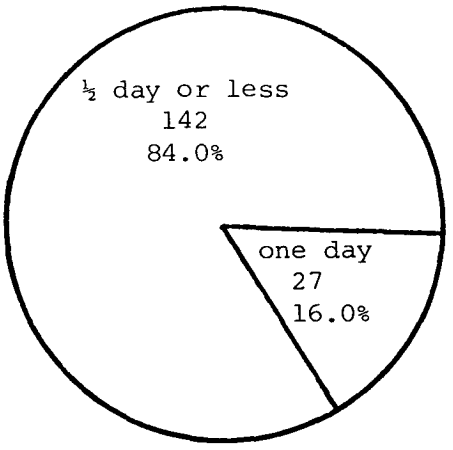
While there were areas of strong similarity between these two groups (sightseers and picnickers), there were also areas of significant difference. While sightseers tended to arrive in two-person parties, picnickers were commonly found in parties of two, four, or four+ with approximately 60% of them participating in groups of four+. This pattern was similar to that shown by those participating in developed camping or caravanning. While sightseers were rarely on a repeat visit to the park area (13.7%), picnickers were more likely to be visiting an area they had visited previously (28.9%). In this respect, they were similar to those

FIGURE 4.7

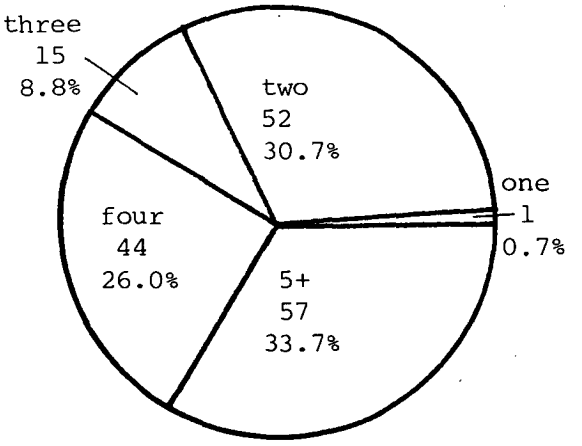
PARTICIPANT CHARACTERISTICS

'PICNICKERS'

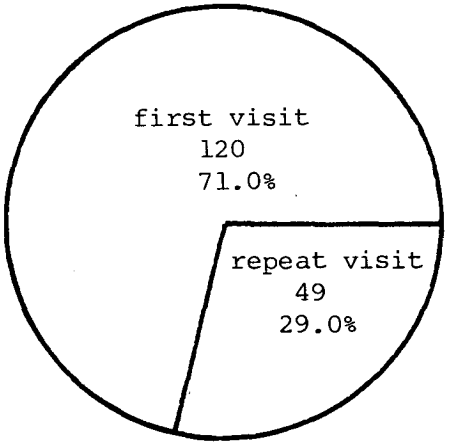
Length of Stay



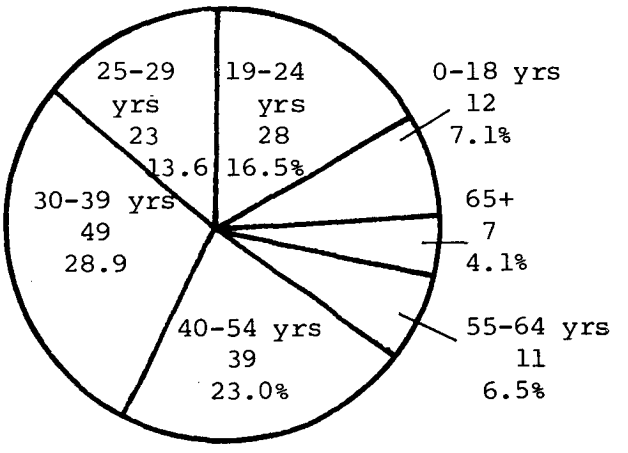
Party Size



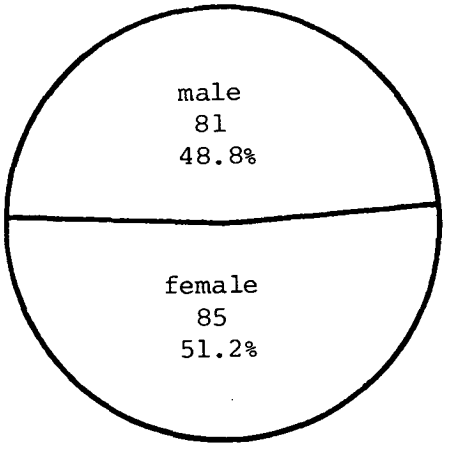
First or Repeat Visit



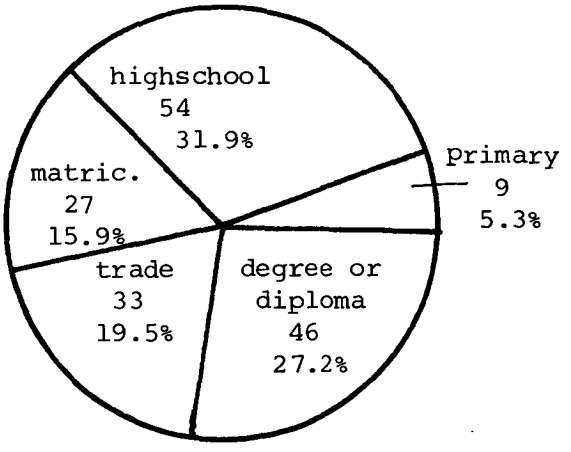
Age



Sex



Education



engaging daywalking and developed camping.

In one regard, picnickers were unique. Although not significantly different from the male/female ratio shown by daywalkers, sightseers or campers, picnickers were the only category where the majority of those included were female.

IV.3.3. Daywalking:

The daywalker category consisted of all those individuals who indicated that daywalking was among the activities in which they participated and whose visit duration was one day or less. Many individuals in this category also engaged in picnicking and/or sightseeing but it was assumed that any walking activities would probably have resulted in greater penetration into the park than would have occurred in the case of those who picnicked or were sightseeing but who did not engage in daywalking. A total of 239 individuals were included in this category (Figure 4.8).

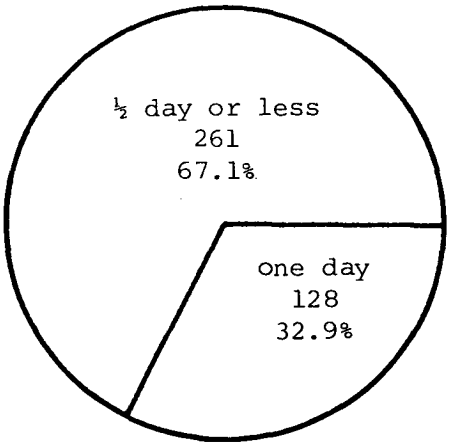
Of those who engaged in day-use activities, daywalkers had a significantly larger proportion of full day visitors (32.9%) than either picnickers (16%) or sightseers (10.2%). While 67% of those who daywalked remained in the area for a half day or less, it is unlikely that many had the extremely brief visits that characterise those whose only activity was sightseeing. Their contact with the park itself was also likely to have been more extensive as they experienced the

FIGURE 4.8

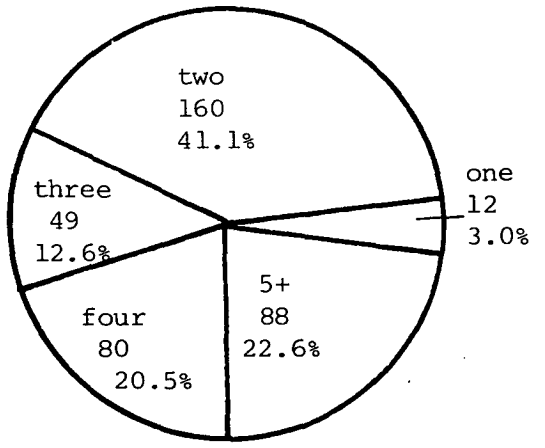
PARTICIPANT CHARACTERISTICS

'DAYWALKERS'

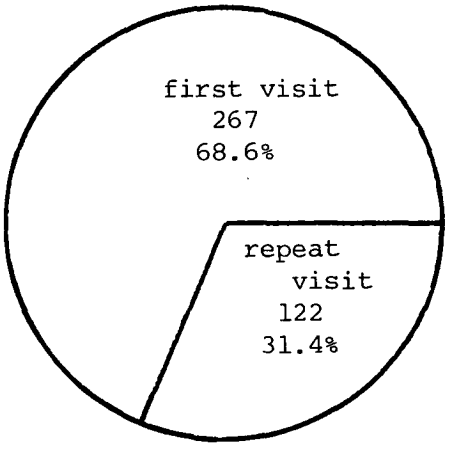
Length of Stay



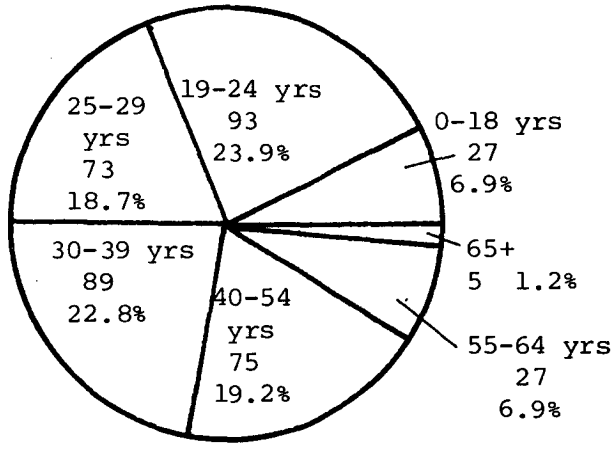
Party Size



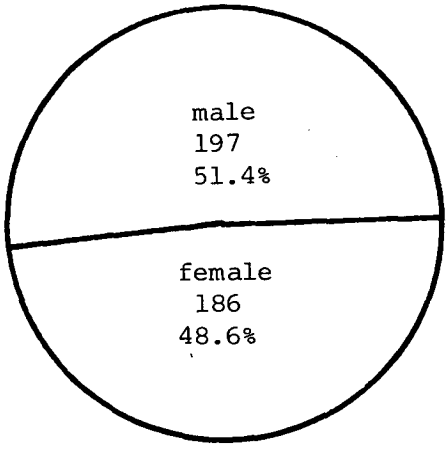
First or Repeat Visit



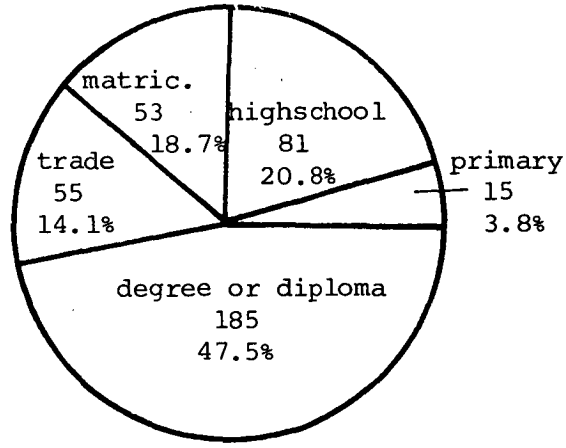
Age



Sex



Education



trails adjacent to the service areas.

The distribution of daywalkers among the party size classes was significantly different from those of both sightseers and picnickers. The category to which it was most similar was that of the developed campers although its average, over the group size classes, was slightly lower (3.18 versus 3.39). This similarity with the camper category extended into other areas beyond party size. While sightseers were rarely visiting the study area for other than a first time visit (13.7%), picnickers, daywalkers and campers were much more likely to be visiting an area with which they were familiar (32.9%, 31.4% and 29% respectively).

Daywalkers tended to be younger than either of the two preceding day-use categories. The largest age class for this activity - setting category was the 19 to 24 age span. In the case of picnickers it was the 30 to 39 year age class and, for sightseers, the 40 to 54 year age class. The daywalkers also had less than half the proportion of its members in the 65+ class than did either picnickers or sightseers. While the difference in the distributions between daywalkers and picnickers was not statistically significant, the weighted average for age classes of 3.49 was much closer to that of the camper category (3.46) than of picnickers (3.8) or sightseers (3.86).

In terms of educational attainment, daywalkers were

significantly different from other day-users and the category showed a considerably larger proportion of degree or diploma holders among its members (47.6%) than either picnickers (27.2%) or sightseers (36.5%).

IV.3.4. Developed Camping:

This category was established to encompass those using the developed camping areas within the parks where vehicles have road access to the camp sites. Included in this category were all participants whose visit duration was greater than one day and who indicated that they participated in either trailer camping or caravanning. Also included were individuals who tent camped but who did not indicate that they backpacked. This was done on the premise that their shelter would have been carried in their vehicle which would have limited their possible camping sites to those with vehicle access. Excluded were those who were rafting, as these individuals could tent camp while not backpacking, that is, by carrying their tents in rafts or canoes. Figure 4.9 presents the general breakdown of the 143 participants in this category.

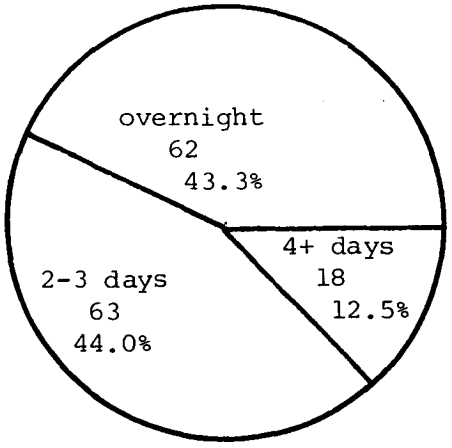
A large proportion (43%) of those camping in the study area parks remained for less than two days. A similar proportion (44%) remained for two or three days. Short term camping use thus accounted for 87% of total participants with fewer than 13% of campers remaining in any one park for more than

FIGURE 4.9

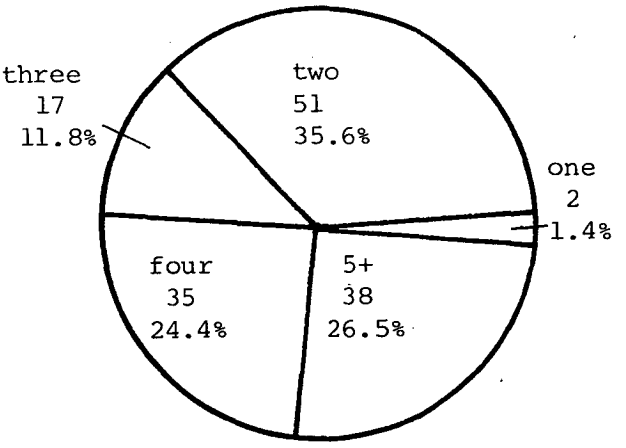
PARTICIPANT CHARACTERISTICS

'DEVELOPED CAMPERS'

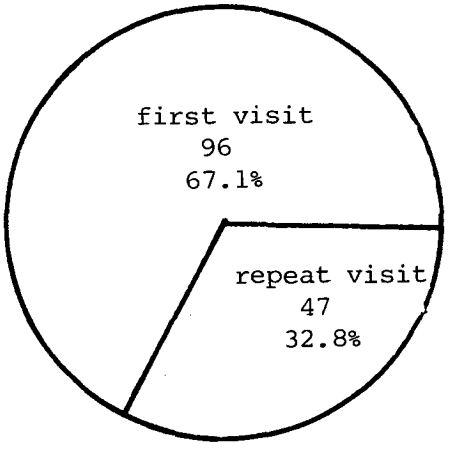
Length of Stay



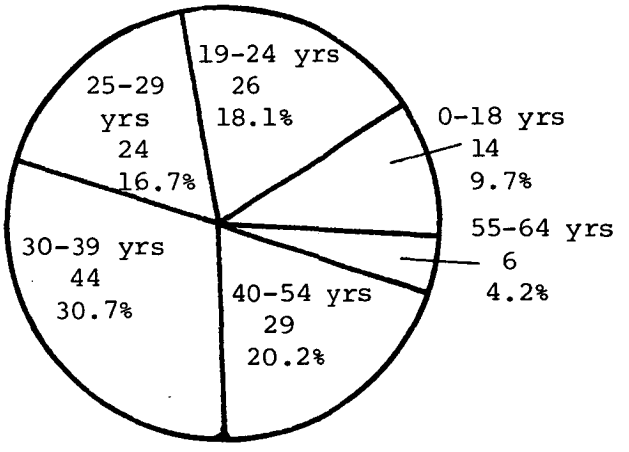
Party Size



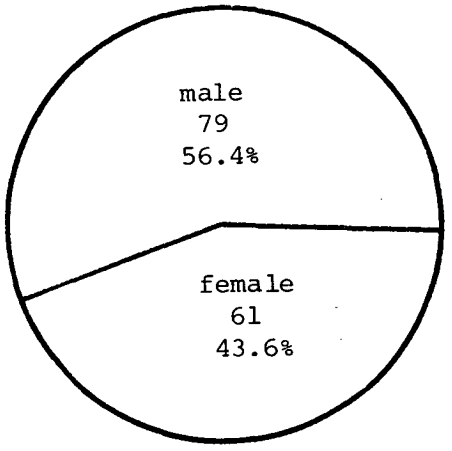
First or Repeat Visit



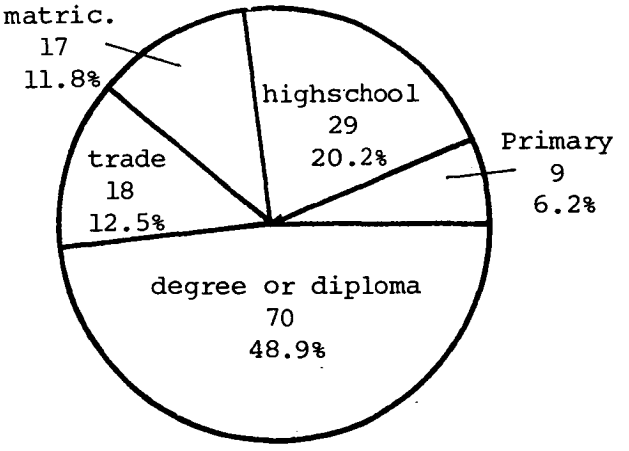
Age



Sex



Education



two or three days. Restricted to the general area around the campsites provided with road access, campers would not penetrate beyond the radius of a daywalk. At the same time, this group did make use of the available daywalking tracks with 80% of campers participating in walks of some sort.

Camping was generally a large-group activity with approximately half of those participating doing so in groups of four or more. The largest single class, however, was the two-person party (35%). The mean for the party size classes was 3.39, midway between that for daywalkers (3.18) and picnickers (3.61). No significant difference was found between the party size class distribution of campers and either of these categories although daywalkers and picnickers were significantly different from each other (at the .05 level) with the former tending towards smaller parties and the latter towards larger ones.

Further similarities arose among these categories with regard to the relative proportions of first time visitors, age class distribution and sex ratios. Sixty-seven percent of campers were visiting the area for the first time; the figure for daywalkers was 68%, and for picnickers, 71%. The largest age class among campers was the 30 to 39 year group with 30% of those in this activity category falling within this age bracket. Campers were somewhat different from the other two categories in that only 4.2% of campers were 55 years of age or older while the relevant figures for

daywalkers and picnickers were 8.1% and 10.6% respectively.

Campers tended to be very well educated with approximately half of them possessing degrees or diplomas. In this respect, campers were most similar to daywalkers with the maximum disparity between proportions in the various levels of educational attainment being 2.4%.

IV.3.5. Bushwalking:

Bushwalking included all individuals who indicated that they participated in backpacking and who remained in the park area overnight or longer. This category was established to encompass those individuals who, carrying shelter and provisions in packs, are able to use the interior of the parks beyond the radius of a day's walk from the nearest point of road access. One hundred twenty-five bushwalkers were included in the study. Figure 4.10 illustrates the broad characteristics of this category.

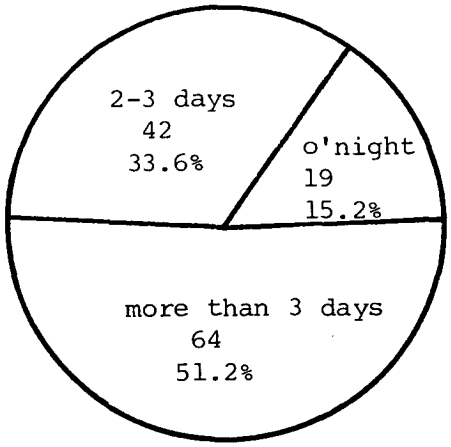
Unlike campers, who are restricted to developed sites with road access, bushwalkers tended to have longer visit durations with about half (51.2%) remaining in the area for longer than three days. This was more than four times the proportion of extended stay campers (12.6%). This situation was reversed with respect to short term visits with only a small proportion of bushwalkers (15.2%) remaining for one night while the comparable figure for campers was much higher (43.4%). This pattern of longer visit duration is a

FIGURE 4.10

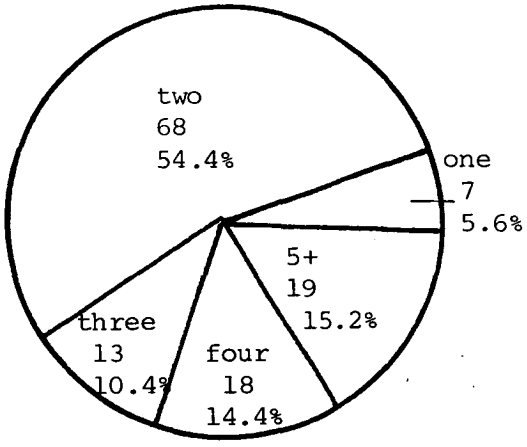
PARTICIPANT CHARACTERISTICS

'BUSHWALKERS'

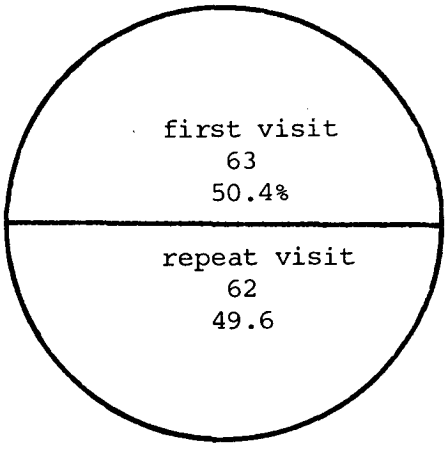
Length of Stay



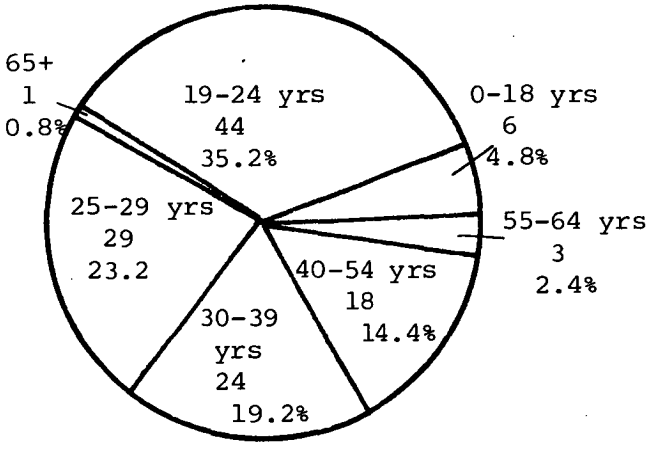
Party Size



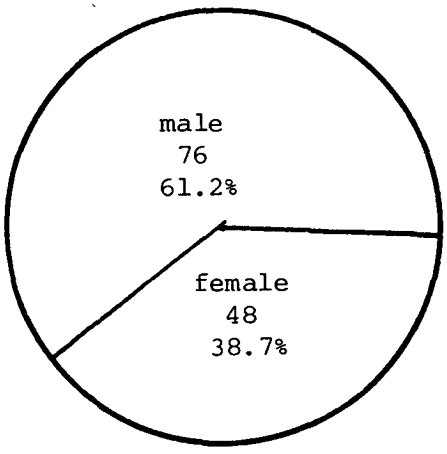
First or Repeat Visit



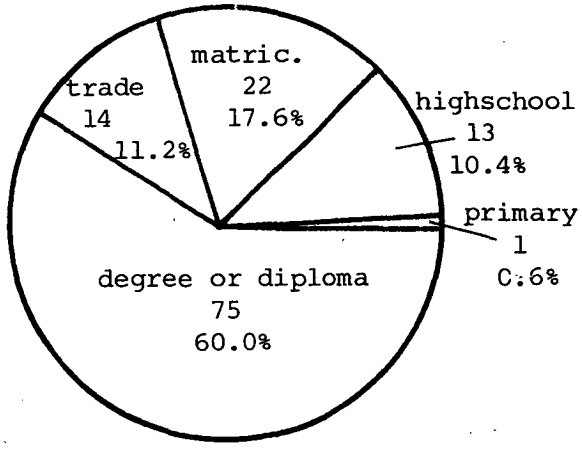
Age



Sex



Education



reflection of bushwalkers' use of the interior of the parks and the necessarily longer times required for walking into and out of the core areas.

Like sightseeing, bushwalking is largely a small-group activity. Bushwalking had the largest proportion of one-person parties (5.6%) and was second only to sightseeing in its proportion of two-person parties (54.4% and 60.9% respectively). The party size class distribution of bushwalkers differed significantly from that of developed campers with the former having a much greater proportion of one- and two-person parties, while the latter was more heavily represented by the four-person and larger party size.

Of the categories examined, bushwalking had the highest percentage of visitors who were entering an area they had previously visited (49.8%). The percentage of repeat visitors was even higher (59.4%) among those bushwalkers who embarked on extended walks of more than three days duration. This would appear to indicate that bushwalkers, particularly those who undertake extended walks, return repeatedly to the same park. All other categories show a much greater tendency to visit new areas rather than return to a park already visited.

The majority of bushwalkers were young adults with 58% of all those in this category falling between the ages of 19

and 29 years. Only rafting had a larger percentage (64.9%) of its participants in this age bracket. Furthermore, like rafting, bushwalking was male dominated (61.2% male versus 81.2% male) and the majority of those involved possessed degrees or diplomas (60% and 64.%, bushwalking and rafting respectively).

IV.3.6. Rafters

All those who floated the Franklin - Lower Gordon River during the summers of 1981-1982 and 1982-1983 were placed in this category. A wide range of craft, other than rafts, were used on the river including one- and two-person kayaks and canoes. Inflatable rubber rafts, however, were most common. In 1981-1982, 80% of those who floated the river used rafts while in 1982-1983 the figure rose to 94%. A total of 835 respondents were placed in this category: 419 from the 1981-1982 season, and 416 from the 1982-1983 season. Figures 4.11 and 4.12 illustrate the broad visitor characteristics for each season.

Rafting the Franklin - Lower Gordon River involves an extended stay of much longer duration than is normally found in other major park areas. Normally, only those who experience difficulties and have to abandon the trip have visits of less than three days. While there was no significant increase in the proportion of those having to walk out, there was a minor rise from 1.3% in 1981-1982 to

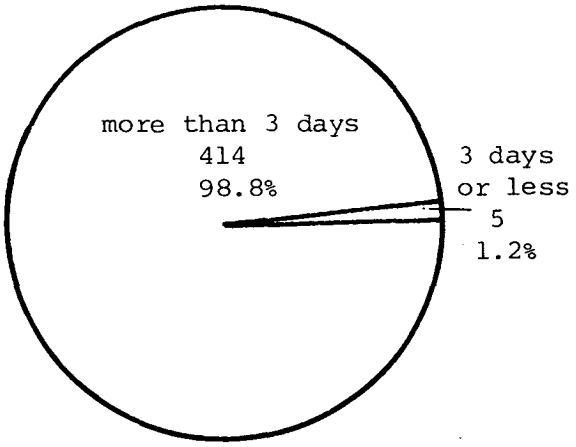
FIGURE 4.11

PARTICIPANT CHARACTERISTICS

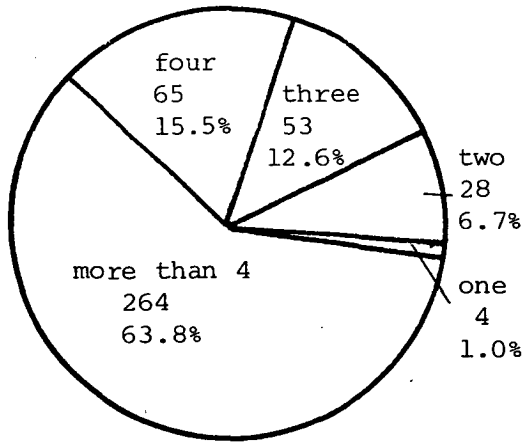
'RAFTERS'

1981-1982

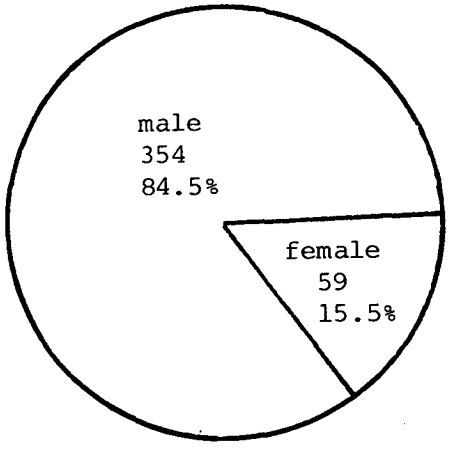
Length of Visit



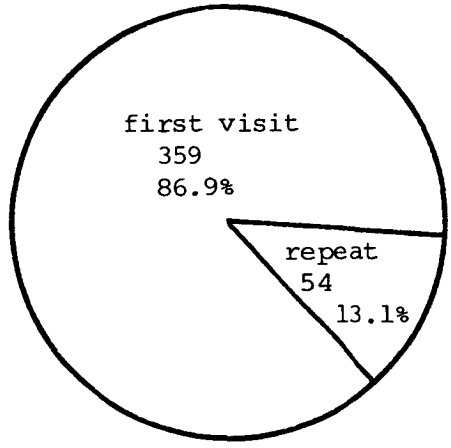
Party Size



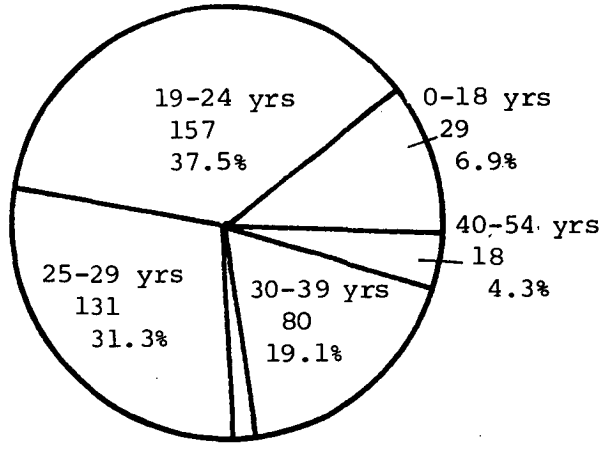
Sex



First or Repeat Visit



Age



55-64 yrs
2
0.6%

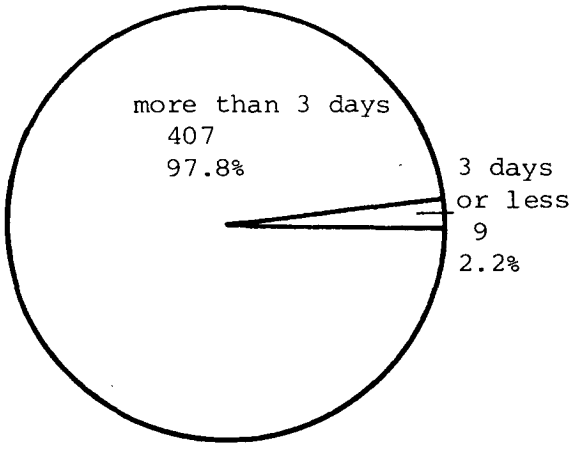
FIGURE 4.12

PARTICIPANT CHARACTERISTICS

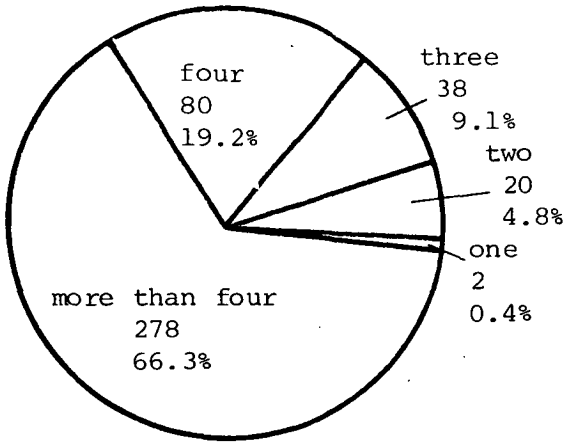
'RAFTERS'

1982-1983

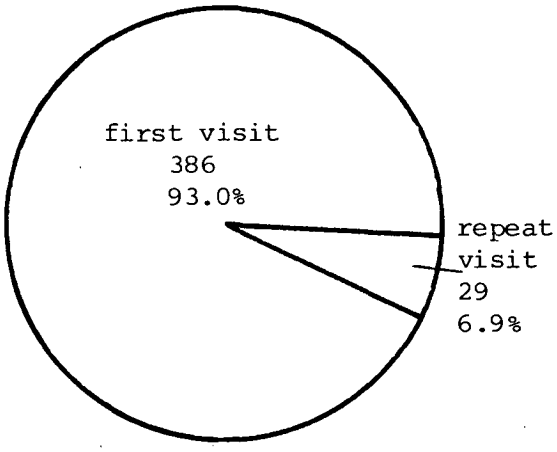
Length of Stay



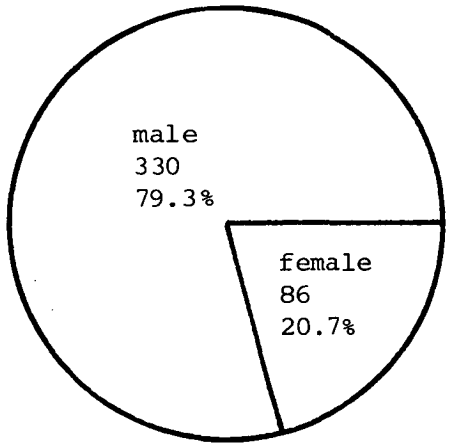
Party Size



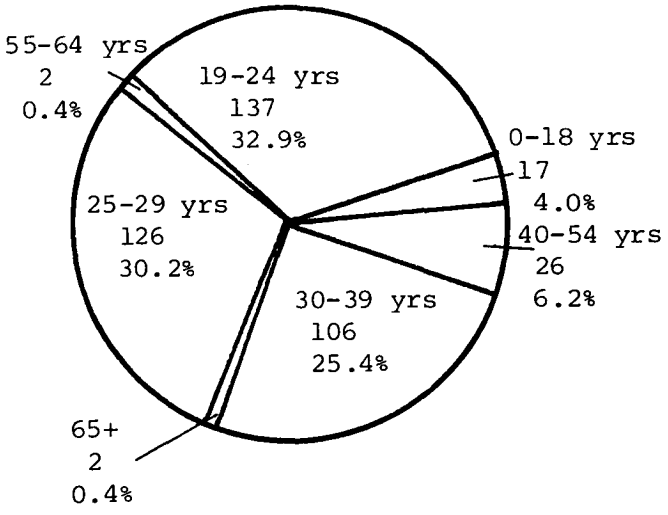
First or Repeat Visit



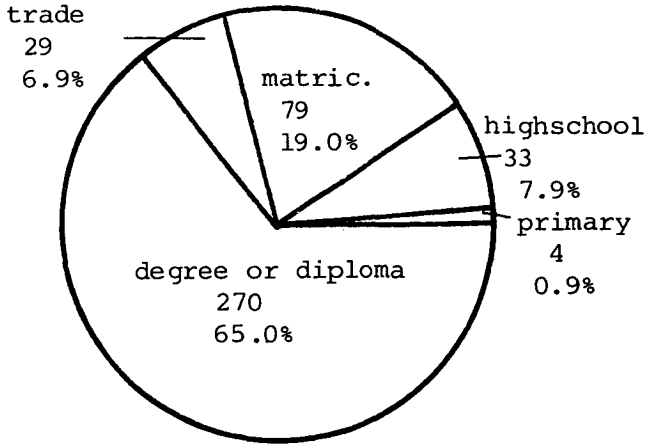
Sex



Age



Education



2.1% in 1982-1983. The average trip took 11 to 12 days with the mean trip durations for the two years being 11.69 days and 11.82 days, respectively. Rafting normally occupied approximately 9.5 days with the remainder taken up with daywalks and sidetrips, making repairs to holed rafts, waiting for water levels to drop, or rest days.

The commercial tours operating on the Franklin - Lower Gordon River were highly consistent in terms of trip duration. During the 1981-1982 season, 46.1% of the commercial tours made the trip in 10 days and a total of 77% managed it in 9 to 12 days (overall mean trip duration: 11 days). During the 1982-1983 season, commercial tour groups were less consistent. Only 32.2% completed the trip in 10 days and the total within the 9 to 12 day span dropped to 59.3%. The mean trip duration for these groups also dropped during 1982-1983 to 10.5 days. Those parties requiring longer than 12 days to complete the trip generally did so because they encountered difficulties, principally dangerously high water levels, and had to camp until it was safe to continue on the river.

The trip durations of private parties in 1981-1982 were much more variable. The most common trip durations were 12 days (15.9%), 14 days (15%) and eleven days (13.4%) with 47% of private parties completing the trip in 9 to 12 days (overall mean: 11 days). The distribution among duration classes evened out slightly in the second season with the 9, 10, 11,

12 and 14 day trips all accounting for more than 10% each and only 44.6% of the sample completed the trip in 9 to 12 days. The mean trip duration for private parties rose in 1982-1983 to 12.6 days.

There were two main sources of variability in trip durations: private parties used a variety of craft, other than rafts, which are capable of making the trip more quickly (13.8% made the trip in 5 to 8 days); and, private parties made many more side trips than did commercial parties (among private parties 36%, in 1981-1982, and 45%, in 1982-1983, took between 13 and 20 days).

A large group activity, parties of rafters were generally larger than those of other activity categories. Small groups were the exception, with groups of four or more accounting for approximately 80% of all entrants. In 1981-1982, the mean party size was 5.9 individuals; in 1982-1983, this had climbed to 6.45. This increase in average party size was largely the result of the increasing proportion of commercially run tours among rafting parties. In 1981-1982, 22% of the respondents indicated that they were part of a commercial tour. In 1982-1983, the figure had risen to 37.5%. Not only did the number of commercial parties rise, but the mean party size of these groups also increased from 8.08 to 9 individuals. At the same time, there was a slight drop in the mean party size of private groups from 4.9 individuals in 1981-1982, to 4.7 in

1982-1983.

Rafting has only recently become a popular recreation pastime. As a result, few of those on the river had any experience with the Franklin - Lower Gordon River. In 1981-1982, only 13% of those on the river had done the trip previously, although 40% claimed some rafting experience, while another 40% claimed no experience at all. In 1982-1983, fewer than 7% had Franklin - Lower Gordon River experience and 45% rated themselves as beginners.

In 1981-1982, there was virtually no difference in the experience levels of those in commercial parties and those in private ones. The following season, however, of those in private parties, 38% rated themselves as beginners with no experience; among those in commercially run parties, the figure rose to 60%.

The increasing density of use of this park shows itself in the number of nights that parties shared campsites with others. Campsites along the river corridor tend to be quite small although, in most sections of the river, numerous. In 1981-1982, parties shared campsites an average of 1.77 times during the course of the trip. In 1982-1983, shared campsites were more frequent, averaging 2.43 occurences. The frequency of inter-group contact also rose. During the first season, 8.4% of those polled saw no one outside their own party for the duration of the trip. The following year

only 1.2% reported seeing no other parties. The proportion of those reporting encounters with 11 or more parties, i.e. an average of one or more per day, rose from 5% to 19.6% over the two seasons.

Rafting the Franklin - Lower Gordon River has been a male dominated activity since it was first successfully accomplished in the 1950s. While still male dominated, more women are now making the trip. The dominance by males dropped marginally over the two seasons from 86.5% to 79.3%. This increase in the proportion of females rafting the Franklin - Lower Gordon River was largely due to the increasing numbers of women in private parties. In 1981-1982, 12.8% of private party members were female. In 1982-1983, females accounted for 20.3% of those in non-commercial groups. The composition of commercial parties remained relatively static with women increasing their representation by only 1.4%. These changes resulted in the sex ratio of the private parties and commercial groups roughly matching.

Rafters were uniformly young adults with the largest numbers being in the 19 to 24 age class in both seasons and the age bracket of 19 to 39 accounting for 87.9% and 88.5% (in 81-1982 and 82-1983 respectively) of all users. The only other activity category that is at all comparable, in terms of age distribution, is bushwalking. While bushwalking had a smaller proportion in this age bracket (77.6%), no

significant difference was found between the overall age class distributions. While no significant change occurred in the age class distributions of rafters over the two seasons, a small upwards shift in the weighted average of the age classes was found. In 1981-1982 the weighted average for age classes was 2.75; it was 2.98 in 1982-1983. Commercial parties had higher weighted age class averages than private parties in both seasons, and both showed similar increases (3.16 to 3.27 and 2.67 to 2.82 respectively).

The level of educational attainment for this category was extremely high with 65% of all rafters possessing either a degree or a diploma. No comparison can be made between the two seasons as the question relating to education level completed was not included in the 1981-1982 survey. Again, only bushwalking possessed a comparable distribution although it had fewer (60%) degree or diploma holders.

IV.4. Non-Response / Self-Selection Bias:

No examination of the self-selection bias introduced to this point is feasible and no data whatsoever is held on those participants who declined to participate in the first phase of the study. Beyond this point, however, an exploration of the compounding bias is possible on the basis of the data already provided.

Analysis of the characteristics of the self-selected subset of those who completed the mail-out portion of the survey reveals significant differences between these respondents and the larger sample of participants who completed the first phase of the study. No differences were detected in terms of state of residence, park visited, sex, or whether or not the visit was a first event or a repeat visit. Those variables which did show significant differences included: group size, visit duration, age, and education.

The tendency to complete the second phase of the survey, the mail-out, was positively linked to the size of the group with which the participant was associated. Individuals who participated on their own or in pairs were least likely to complete both phases of the survey, being under-represented in the second phase by 3.5%. As party size increased so too did the likelihood of obtaining a completed mail-out form with the larger groups (more than four individuals) being over-represented in the second phase by 4.1%. In this instance there may well have been a group re-inforcement or "reminder" factor operating. It may be fair to assume that individuals who choose to participate in a group on one occasion, be they members of the same family or simply friends, may very well interact socially on other occasions and, as this survey did not employ mail-out reminders, the receipt by each member of the group of the single mail-out form may have served as a reminder to the other members of the group that they too had received a form thereby

increasing the return rate.

As was the case with the size of the group, the length of the visit was positively linked to the tendency to complete the phase two form. The greater the length of time spent in the park, the higher the proportion of completed phase two forms. Rafters, whose visit duration was normally 10 or more days, were over-represented by some 14.2% while picnickers and sightseers, at the opposite extreme, were under-represented by 4.7% and 5.2% respectively. While there is no suggestion that the length of any visit would necessarily contribute to the degree of satisfaction, the shorter term visitors, those who were in the park for one day or less, may have felt that the second phase of the study was of limited relevance to their experiences as it was of considerable length and was intended to elicit reactions to statements that could be interpreted as being more applicable to "pure" wilderness users.

All participant groups under 40 years of age were over-represented with those in the 25 to 29 years age group completing the second phase form some 3.4% more often than anticipated. The remaining below-40 age groups showing lesser but still higher than anticipated participation rates. Of those 40 years of age and over, the 40 to 54 years group were most under-represented at 3.1% below anticipated with the participation rate improving with increasing age.

Finally, education was positively linked with the response rate with those with increasingly higher levels of education having higher response rates. This may well have been simply a greater familiarity and ease of dealing with forms. It is worth noting that the highest level of over-representation, some 9.4%, arose from those respondents who declined to indicate their level of education completed. Clearly, there is among park users a group whose interest and willingness to participate in user studies is high but who are reluctant to reveal their level of education. There are a number of possible reasons among which are: a view that the question is not relevant; a concern, if they are highly educated, that a truthful response might further the view that national park areas are the preserve of social elites; or, they may be concerned to reveal a lack of formal education.

Overall, it is clear that the remaining analysis favors the views and perceptions of a group that through successive self-selection is significantly over-represented. That group consists of those under 40 years of age, who are likely to be highly educated, spend longer that average periods within the parks and who participate in larger groups.

IV.5. Discussion:

Seven categories of visitors were created on the basis of their choice of broad activity categories and visit

durations which are indicative of broadly defined recreation settings in order to examine possible differences in the user characteristics among these categories. These activity - setting categories were defined in such a way as to reflect the concepts embodied in the recreation opportunity spectrum concept of Clark and Stankey (1979). The principal goal of this exercise was to establish the gross differences in user groups that occur as one moves along the continuum from the developed (sightseeing) to the primitive (rafting); in particular, the differences between those who chose to raft the Franklin - Lower Gordon River, and those who participated in the various other activities in the study area parks. A secondary aim was to examine the changes that have occurred in the use and users of the Franklin - Lower Gordon River during the two season of 1981-1982 and 1982-1983. Table 4.1 summarises the similarities and differences that were discovered among the seven activity - setting categories.

The activity - setting categories that occupy similar or adjacent positions along a continuum, based on proximity to visitor service areas, show similarities in the user characteristics of their members. If placed along this continuum, the order of the activity - settings might be as follows: sightseeing, picnicking, developed camping, daywalking, bushwalking and rafting. Daywalking and sightseeing had three common attributes: proportion of first time visitors, age distribution and sex ratio. Picnicking

TABLE 4.1

COMPARISON OF ACTIVITY - SETTING CATEGORIES BY VISIT AND VISITOR CHARACTERISTICS

ACTIVITY - SETTING	RAFTING '81-82	RAFTING '82-83	BUSHWALKING	DAYWALKING	CAMPING	PICNICKING
Sightseeing	duration *	duration *	duration *	duration *	duration *	duration *
	grp.size *	grp.size *	grp.size *	grp.size *	grp.size *	grp.size *
	visited	visited	visited *	visited *	visited *	visited
	age *	age *	age *	age *	age *	age
	sex *	sex *	sex	sex	sex	sex
		education *	education *	education *	education *	education *
Picnicking	duration *	duration *	duration *	duration *	duration *	
	grp.size *	grp.size *	grp.size *	grp.size *	grp.size *	
	visited *	visited *	visited *	visited	visited	
	age *	age *	age *	age	age	
	sex *	sex *	sex *	sex	sex	
		education *	education *	education *	education *	
Camping	duration *	duration *	duration *	duration *		
	grp.size *	grp.size *	grp.size *	grp.size		
	visited *	visited *	visited *	visited		
	age *	age *	age *	age		
	sex *	sex *	sex	sex		
		education *	education *	education *		
Daywalking	duration *	duration *	duration *			
	grp.size *	grp.size *	grp.size *			
	visited *	visited *	visited *			
	age *	age *	age			
	sex *	sex *	sex *			
		education *	education			

CONT'D...

TABLE 4.1 CONT'D

ACTIVITY - SETTING	RAFTING '81-82	RAFTING '82-83
Bushwalking	duration *	duration *
	grp.size *	grp.size *
	visited *	visited *
	age *	age
	sex *	sex *
		education
Rafting '82-83	duration *	
	grp.size	
	visited	
	age	
	sex *	

---

* proportional distribution significantly different at the .05 level of probability.
"grp.size" = party size
"visited" = proportion of first-time visitors

and developed camping had four common attributes, while picnicking and daywalking had three. Daywalking and bushwalking had two; bushwalking and rafting (1982-1983) had two; and rafting (1982-1983) and rafting (1981-1982) had four common user attribute profiles.

Two consistent trends appeared along this crude continuum. As the activity - setting shifted towards the more remote and less developed, levels of educational attainment rose and mean age levels fell. Visit durations tended to increase within the groups considered as day-use only and multi-day use. With the exception of rafting, there was also a tendency for there to be a higher proportion of return visitors as one moved from the developed to the remote.

The rafting category was considered twice as each season was treated independently. Those of the 1981-1982 rafting season were significantly different from all non-rafters. In 1982-1983, with the increasing popularization of the Franklin - Lower Gordon River, there were similarities between those rafting and those bushwalking. A number of changes took place during the two seasons and, although they were not major shifts, they took place within a very short time span. The popularity of the Franklin - Lower Gordon River led to an estimated doubling of the number of rafters on the river; commercial tour operators increased their share of total numbers from 22% to 37.5%; they increased

their mean party size while private parties got smaller; they reduced their trip duration while private parties were increasing theirs. In the narrow river corridor this meant a greater number of encounters.

Other shifts that occurred include the increasing numbers of females; the increasing numbers of totally inexperienced individuals; and, the slight rise in the mean age of those who made the trip in 1982-1983.

CHAPTER FIVE

RECREATION EXPERIENCES AND THE WILDERNESS PARKS

This chapter examines the experience opportunities - the "bundles" of outcomes that visitors associate with the Western Tasmanian Wilderness Parks and with each of the broad activity setting categories established in Chapter Four (sightseeing, picnicking, daywalking, developed camping, bushwalking, and rafting). It also examines the experience opportunities associated with one activity setting (rafting) by a number of subgroupings of participants.

The user-defined experience opportunities were derived from the participant scoring of the 62 outcome scale items which formed the final questionnaire sections of both stages of the study. These outcome scale items were reduced, via cluster analysis, to 13 groups or domains of statistically and conceptually related items. These domains of items were then labelled to reflect the underlying or common theme of the items within the domain (Table 5.1).

Domain one, "Achievement" was so labelled because the four scale items within it refer to skills, abilities, capabilities and accomplishments, the use or discovery of which could contribute to generalised feelings of

TABLE 5.1

OUTCOME DOMAINS AND SCALE ITEMS DERIVED FROM CLUSTER ANALYSIS PERFORMED ON ALL COMPLETED RETURNS: 1981 - 1983 SURVEY FORMS (N=1028)

DOMAINS	SCALE ITEMS	MEAN (item)	STD. DEV.	MEAN (domain)	RELIABILITY (Cronbach's Alpha)
Achievement (1)	Developing your skills and ability	2.12	1.42		
	Finding out what your capabilities are	1.83	1.56		
	Accomplishing something	2.59	1.35		
	Using your outdoor skills	2.01	1.43		
				2.18	.81
Autonomy (2)	Being your own boss	1.11	1.56		
	Feeling in charge of what's happening	1.02	1.51		
				1.07	.60
Risk Taking (3)	Taking a few risks	1.89	1.61		
	Chancing a dangerous situation	1.41	1.83		
	Feeling a bit frightened	0.95	1.75		
	Facing a challenge	2.20	1.49		
				1.63	.81
Equipment (4)	Using your equipment	0.80	1.36		
	Comparing your equipment to that of others	0.17	1.34		
	Showing others what you can do	0.58	1.33		
				0.51	.65
Family Togetherness (5)	Doing something with the family	0.81	1.72		
	Being with another member of the family	0.93	1.77		
	Having the whole family share an experience	0.49	1.52		
				0.74	.90
Social Contact (6)	Being with other members of your group	2.12	1.51		
	Doing things with your companions	2.21	1.41		
	Being with people who have similar interests	2.20	1.38		
	Being with your friends	1.85	1.59		
				2.09	.80
Meeting/Observing People (7)	Having a chance to meet new people	1.20	1.54		
	Seeing new faces	0.96	1.62		
				1.08	.80
Nature/Discovery (8)	Discovering something new and different	2.51	1.28		
	Learning about the outdoors	2.22	1.42		
	Finding out about new things	2.44	1.38		
	Having new experiences	2.69	1.34		
	Enjoying the scenery	3.38	0.92		
	Experiencing the sights and sounds of nature	3.13	1.09		
	Being close to nature	3.06	1.17		
	Being in a natural setting	3.15	1.07		
				2.82	.87
Introspection (9)	Learning about yourself and who you are	1.45	1.52		
	Thinking about the future	0.96	1.70		
	Reflecting on spiritual or higher values	1.04	1.65		
	Thinking about your personal values	1.40	1.49		
				1.21	.73

TABLE 5.1 CONT'D

DOMAINS	SCALE ITEMS	MEAN (item)	STD. DEV.	MEAN (domain)	RELIABILITY (Cronbach's Alpha)
Stimulation/ Renewal (10)	Gaining a new perspective and outlook	1.86	1.51		
	Gaining inspiration	1.71	1.51		
	Being stimulated and excited	2.69	1.32		
				2.09	.74
Exercise/ Physical Fitness (11)	Getting exercise	2.22	1.45		
	Keeping fit and in shape	1.83	1.47		
	Feeling good after being physically active	2.20	1.35		
				2.08	.78
Escaping Social / Physical Pressures (12)	Giving your mind a rest	2.07	1.66		
	Getting rid of tension and anxiety	1.79	1.57		
	Having a change from your everyday routine	2.71	1.27		
	Being Alone	1.29	1.71		
	Experiencing peace and tranquility	2.90	1.25		
	Being away from the noise back home	2.71	1.43		
	Finding solitude	2.12	1.61		
	Feeling isolated	1.43	1.84		
				2.13	.79
Freedom (13)	Getting away from the demands of other people	1.24	1.65		
	Being obligated to no-one	0.99	1.71		
				1.11	.72

achievement. Similarly, domain six, "Social Contact" was labelled as such due to its constituent items all relating to in-group sharing of experiences and the development or re-inforcement of social bonds.

As the participant was requested to indicate the degree to which each scale item contributed to, or detracted from, his or her satisfaction with the recreation engagement, any deviation of the mean score from a value of zero indicates that the participant associated that particular scale item with the engagement. The mean of the scores of the items included in each domain provide an indication of the participant's valuation of that domain in terms of its contribution to overall visit satisfaction. Extending this process to the sample as a whole, the mean scores of the domains provide an indication of the type or nature of the experience opportunities contributing most strongly to visitor satisfaction.

The domains used in the analysis were generated from the respondent data and vary in the placement of a number of scale items from the domains derived in previously cited studies, but the overall themes of the domains are generally consistent with previous research (Driver 1977, 1979; Driver and Cooksey 1977; Haas 1979).

The aim of this chapter is to use the domain scores to describe the experience opportunity profiles that

participants associate with the parks and the broad activity settings they provide in order to identify those aspects of the experience opportunities which differentiate the activity settings from one another in the view of area users. Its aim is also to determine whether any significant differences exist among the experience opportunities associated with one activity setting (rafting the Franklin) by readily identifiable subgroups of participants.

V.1. The Outcome Profiles of the Wilderness Parks:

With the domain scores weighted so that each of the wilderness parks, in spite of varying sample sizes, contributed equally to the determination of the overall mean domain scores, the most important domains, in descending order of importance were: Nature/Discovery (D8), Social Contact (D6), Exercise/Physical Fitness (D11), Escape (D12), Stimulation/Renewal (D10), Achievement (D1), Family (D5), Freedom (D13), Introspection (D9), Autonomy (D2), Meeting/Observing People (D7), Risk Taking (D3) and Equipment (D4). Of the 13 domains, only 8 had means that were significantly greater than 1.00 (slightly contributing to visit satisfaction) on the -4 to +4 scoring scale used. No domain had a mean lower than .38 (Equipment).

The 8 domains with means significantly greater than 1.00 occurred in five groupings of roughly similarly scored

domains:

[1] Domain 8: Nature/Discovery (2.68)

[2] Domain 6: Social Contact (2.08)
Domain 11: Exercise/Physical Fitness (2.05)
Domain 12: Escape (2.00)

[3] Domain 10: Stimulation/Renewal (1.79)
Domain 1: Achievement (1.71)

[4] Domain 5: Family (1.46)

[5] Domain 13: Freedom (1.24).

With the exception of the domain scores returned by users of the Franklin - Lower Gordon, the study areas all had user profiles that were similar in both their pattern and the relative magnitude of the scores on each domain (Figure 5.1). In all instances, the users of the general use park areas (Lake St Clair, Cradle Mountain, Mount Field, and the Southwest) rated domain 8 (Nature/Discovery) as being the single most important contributor to visit satisfaction, scoring it well above all other domains (2.46, 2.6, 2.64, and 2.66 respectively). This was followed, in the returns for Lake St Clair, Cradle Mountain, and Mount Field, by a grouping of domains 6, 11, and 12 (Social Contact, Exercise/Physical Fitness and Escape) all of which were scored closely around the level of 2.00 ($\pm$0.2) (Table 5.2).

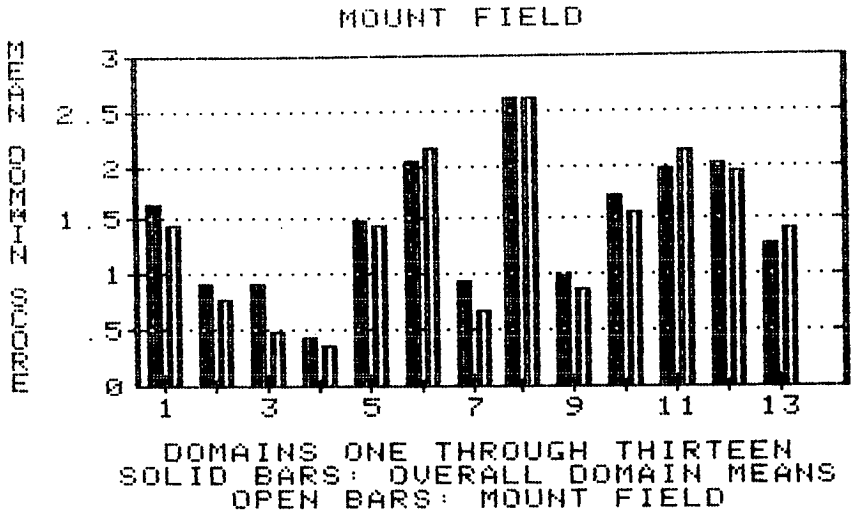
The profile for the Southwest differed slightly from those of Lake St Clair, Cradle Mountain and Mount Field in that domain 5 (Family) was rated second in importance to domain 8 (Nature/Discovery) and was significantly more important than the grouping of domains 6, 11, and 12 (Figure 5.1 and Table

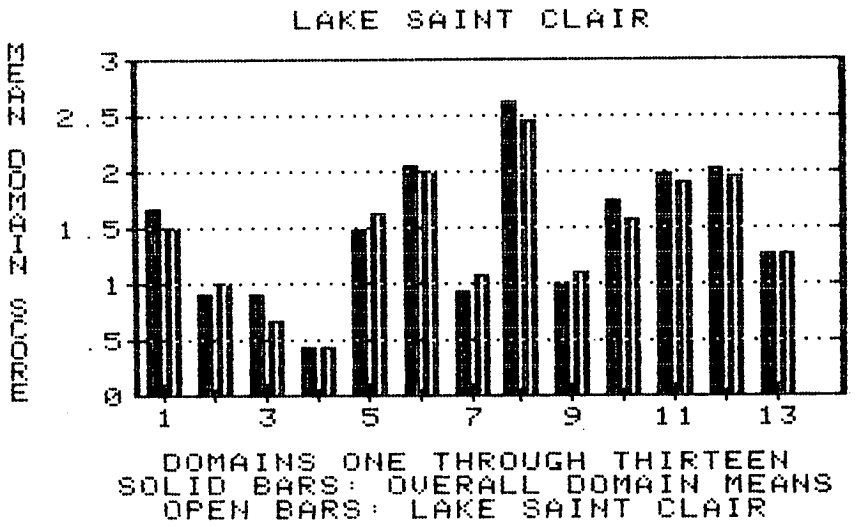
FIGURE 5.1

INDIVIDUAL OUTCOME PROFILES OF THE WESTERN WILDERNESS PARKS

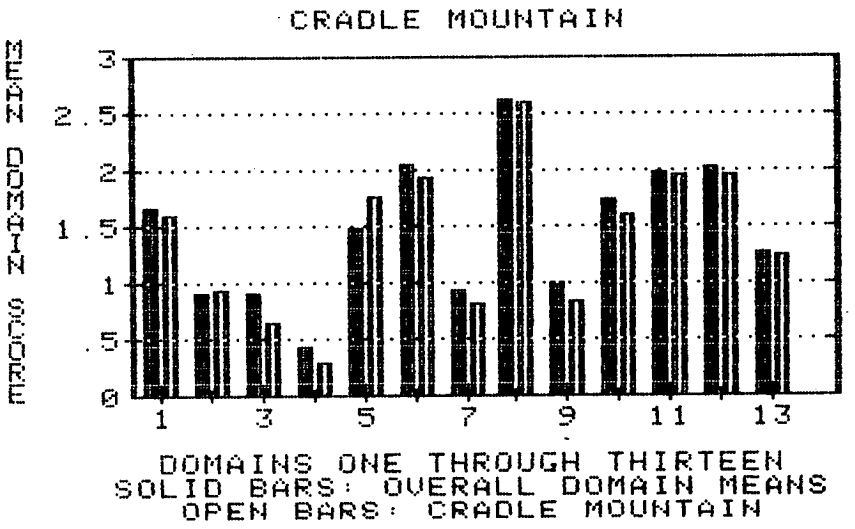
AND

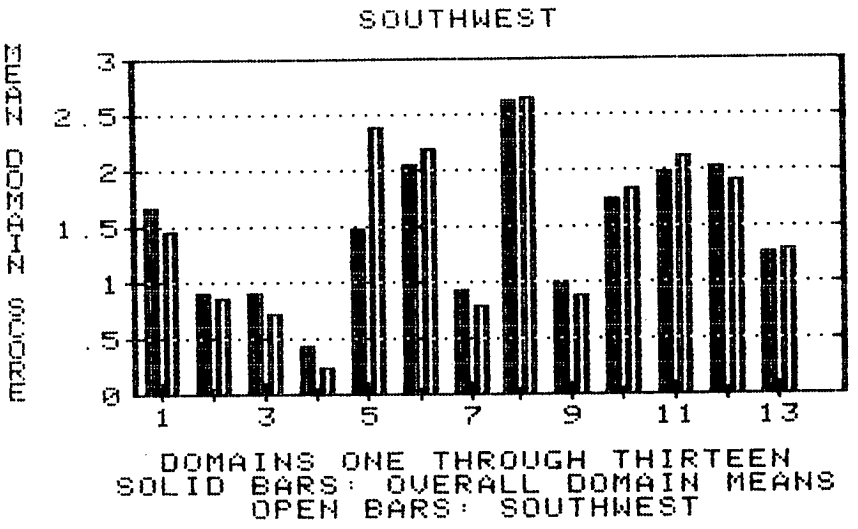
THE COMPOSITE OUTCOME PROFILE

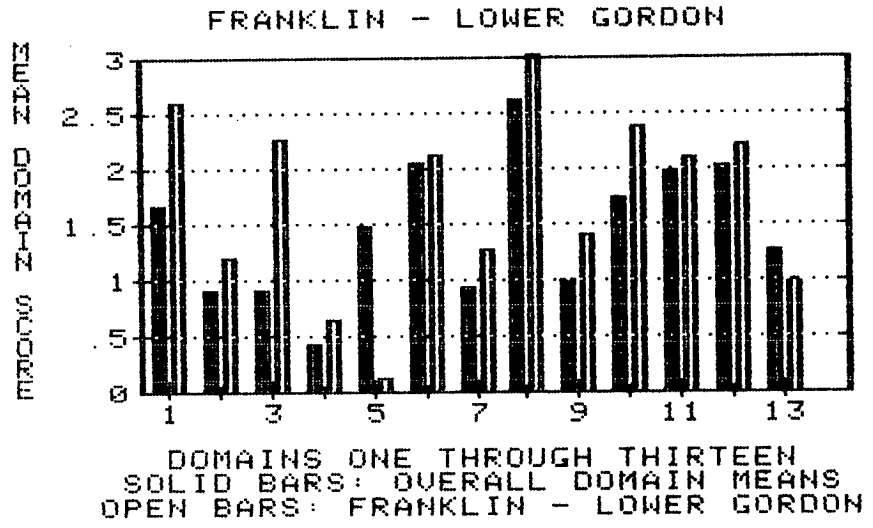




1. Achievement
2. Autonomy
3. Risk Taking
4. Equipment
5. Family
6. Social Contact
7. Meeting/ Observing
8. Nature/ Discovery
9. Introspection
10. Stimulation/ Renewal
11. Exercise/ Physical Fitness
12. Escaping Social/ Physical Pressures
13. Freedom







1. Achievement
2. Autonomy
3. Risk Taking
4. Equipment
5. Family
6. Social Contact
7. Meeting/ Observing
8. Nature/ Discovery
9. Introspection
10. Stimulation/ Renewal
11. Exercise/ Physical Fitness
12. Escaping Social/ Physical Pressures
13. Freedom

5.2). This relatively higher scoring of domain 5 (Family) is consistent with the Southwest's pattern of use which had a higher proportion of family groupings among its users.

The Nature/Discovery domain was by far the most significant contributor to participant satisfaction among visitors to the wilderness parks, its overall mean of 2.68 placing it well beyond any other. The dominant experience opportunities perceived and most highly valued by visitors were clearly those associated with the region being a natural area of outstanding scenic beauty, where visitors can feel close to nature through exposure to natural sights and sounds; a region that was both new and different as the majority of visitors were visiting for the first time; and that provided opportunities for learning and having new experiences while in a setting perceived to be very natural. Within this domain, items referring to nature and scenery scored highest, followed by those items referring to learning or discovery.

Wilderness rafters (that is, those visiting the Franklin - Lower Gordon) scored the Nature/Discovery domain very highly and attributed to it a much greater value in terms of its contribution to visit satisfaction than did visitors to the other park areas (Table 5.2). The Franklin - Lower Gordon Wild Rivers National Park, of course, has the least amount of development and participants are surrounded by and in intimate contact with the scenery rather than admiring

TABLE 5.2

OUTCOME DOMAINS AND SCALE ITEMS: DOMAIN SCORES BY LOCATION
(IN DECLINING ORDER OF IMPORTANCE TO NON-RAFTERS)

DOMAINS AND SCALE ITEMS	Franklin-Lower Gordon WRNP N=633		Lake St. Clair NP N=75		Cradle Mountain NP N=140		Mount Field NP N=114		Southwest NP N=66	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
Nature/Discovery (Domain 8)										
Learning about the outdoors	2.28	1.45	1.96	1.39	2.15	1.35	2.14	1.28	2.21	1.41
Finding out about new things	2.76	1.28	1.81	1.43	2.00	1.33	1.88	1.47	2.06	1.33
Having new experiences	3.10	1.11	1.96	1.47	2.04	1.32	2.08	1.48	1.92	1.39
Enjoying the scenery	3.49	0.89	3.11	1.01	3.15	0.96	3.25	0.90	3.36	0.91
Experiencing the sights and sounds of nature	3.22	1.09	2.79	1.20	3.02	1.05	3.08	1.10	3.01	1.07
Being close to nature	3.16	1.16	2.73	1.50	2.92	1.09	2.94	1.07	2.95	1.06
Being in a natural setting	3.26	1.05	2.84	1.18	2.92	1.08	3.09	1.02	3.09	0.99
Domain Mean	3.04		2.46		2.60		2.64		2.66	
Social Contact (Domain 6)										
Being with other members of your group	2.16	1.52	2.05	1.48	1.93	1.61	2.18	1.36	2.13	1.43
Doing things with your companions	2.16	1.43	2.09	1.45	2.21	1.41	2.38	1.28	2.51	1.26
Being with people who have similar interests	2.29	1.37	2.13	1.50	2.05	1.35	1.99	1.31	2.06	1.40
Being with your friends	1.87	1.58	1.72	1.65	1.52	1.58	2.09	1.54	2.04	1.58
Domain Mean	2.12		2.00		1.93		2.16		2.19	
Exercise/ Physical Fitness (Domain 11)										
Getting exercise	2.19	1.54	2.18	1.25	2.12	1.27	2.35	1.27	2.42	1.32
Keeping fit and in shape	1.89	1.51	1.61	1.37	1.71	1.45	1.88	1.37	1.64	1.33
Feeling good after being physically active	2.25	1.36	1.94	1.45	2.04	1.30	2.18	1.23	2.30	1.39
Domain Mean	2.11		1.91		1.96		2.14		2.12	

CONT'D...

TABLE 5.2 CONT'D

DOMAINS AND SCALE ITEMS	Franklin-Lower Gordon WRNP N=633		Lake St. Clair NP N=75		Cradle Mountain NP N=140		Mount Field NP N=114		Southwest NP N=66	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
Escaping Social/ Physical Pressures (Domain 12)										
Giving your mind a rest	1.99	1.79	2.15	1.47	2.18	1.36	2.19	1.45	2.32	1.49
Getting rid of tension and anxiety	1.75	1.67	2.08	1.56	1.62	1.30	1.94	1.38	1.89	1.44
Having a change from your everyday routine	2.78	1.32	2.41	1.24	2.53	1.15	2.66	1.15	2.73	1.10
Being alone	1.52	1.73	1.14	1.75	0.94	1.66	0.86	1.65	0.69	1.37
Experiencing peace and tranquility	2.95	1.27	2.68	1.31	2.83	1.19	2.88	1.14	2.82	1.20
Being away from the noise back home	2.69	1.51	2.60	1.43	2.83	1.23	2.76	1.25	2.62	1.31
Finding solitude	2.26	1.63	1.89	1.85	1.97	1.50	1.85	1.49	1.73	1.38
Feeling isolated	1.93	1.78	0.77	1.66	0.76	1.69	0.48	1.65	0.50	1.57
Domain Mean	2.23		1.96		1.96		1.95		1.91	
Stimulation/Renewal (Domain 10)										
Gaining a new perspective and outlook	2.09	1.53	1.49	1.45	1.47	1.39	1.36	1.44	1.65	1.36
Gaining inspiration	1.93	1.55	1.40	1.51	1.28	1.32	1.35	1.28	1.57	1.49
Being stimulated and excited	3.11	1.12	1.84	1.36	2.01	1.26	1.96	1.36	2.28	1.33
Domain Mean	2.38		1.58		1.59		1.56		1.84	
Family Togetherness (Domain 5)										
Doing something with the family	0.13	1.30	1.75	1.72	1.91	1.71	1.57	1.84	2.54	1.59
Being with another member of the family	0.23	1.41	1.88	1.71	2.18	1.65	1.73	1.79	2.62	1.55
Having the whole family share an experience	-0.01	1.12	1.20	1.60	1.21	1.71	1.02	1.65	1.96	1.77
Domain Mean	0.12		1.61		1.77		1.44		2.38	
Achievement (Domain 1)										
Developing your skills and ability	2.55	1.23	1.45	1.51	1.42	1.42	1.38	1.48	1.53	1.40
Finding out what your capabilities are	2.27	1.53	1.05	1.22	1.33	1.40	1.06	1.30	1.07	1.37
Accomplishing something	3.08	1.80	1.88	1.32	2.02	1.27	1.89	1.27	1.88	1.49
Using your outdoor skills	2.48	1.34	1.59	1.41	1.59	1.37	1.34	1.37	1.35	1.28
Domain Mean	2.60		1.49		1.59		1.42		1.45	

CONT'D...

TABLE 5.2 CONT'D

DOMAINS AND SCALE ITEMS	Franklin-Lower Gordon WRNP N=633		Lake St. Clair NP N=75		Cradle Mountain NP N=140		Mount Field NP N=114		Southwest NP N=66	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
Freedom (Domain 13)										
Getting away from the demands of other people	1.09	1.74	1.47	1.55	1.39	1.38	1.54	1.58	1.47	1.45
Being obligated to no-one	0.90	1.81	1.07	1.43	1.08	1.43	1.25	1.68	1.12	1.65
Domain Mean	0.99		1.27		1.24		1.40		1.29	
Introspection (Domain 9)										
Learning about yourself and who you are	1.75	1.58	1.19	1.34	0.91	1.29	0.93	1.25	0.86	1.26
Thinking about the future	1.13	1.78	1.01	1.34	0.61	1.67	0.66	1.36	0.50	1.47
Reflecting on spiritual or higher values	1.14	1.73	1.03	1.49	0.81	1.46	0.74	1.42	1.00	1.65
Thinking about your personal values	1.60	1.54	1.33	1.30	1.01	1.37	1.07	1.39	1.15	1.37
Domain Mean	1.41		1.09		0.84		0.86		0.88	
Autonomy (Domain 2)										
Being your own boss	1.17	1.63	1.20	1.45	1.09	1.47	0.86	1.34	1.00	1.49
Feeling in charge of what's happening	1.22	1.62	0.71	1.42	0.74	1.21	0.66	1.20	0.73	1.28
Domain Mean	1.20		0.99		0.92		0.76		0.86	
Meeting/Observing New People (Domain 7)										
Having a chance to meet new people	1.39	1.59	1.15	1.40	0.93	1.34	0.77	1.51	0.86	1.33
Seeing new faces	1.12	1.75	0.99	1.34	0.68	1.26	0.53	1.35	0.71	1.49
Domain Mean	1.26		1.07		0.80		0.65		0.79	
Risk Taking (Domain 3)										
Taking a few risks	2.57	1.43	0.93	1.26	0.86	1.26	0.78	1.15	0.74	1.42
Chancing a dangerous situation	2.08	1.84	0.39	1.24	0.36	1.37	0.35	1.10	0.48	1.24
Feeling a bit frightened	1.57	1.73	0.08	1.53	-0.08	1.19	-0.22	1.10	0.17	1.14
Facing a challenge	2.86	1.19	1.28	1.35	1.38	1.41	1.00	1.29	1.41	1.44
Domain Mean	2.27		0.67		0.63		0.48		0.70	
Equipment (Domain 4)										
Using your equipment	0.91	1.41	0.79	0.34	0.56	1.21	0.51	1.23	0.68	1.19
Comparing your equipment to that of others	0.29	1.49	0.09	0.93	-0.08	0.99	0.08	1.06	-0.22	1.09
Showing others what you can do	0.71	1.45	0.35	1.12	0.36	1.06	0.45	1.03	0.21	1.10
Domain Mean	0.64		0.41		0.28		0.34		0.22	

middle and distant vistas from a more developed area or viewing point.

The area that visitors would perceive as being most developed is Lake St Clair with its high standard of access, its location, and comparatively well developed facilities. Interestingly, the respondents from this park area gave the lowest overall score to the Nature/Discovery domain and all of the outcome items within it.

While Lake St Clair may be perceived as being the most developed area, the portion of the Southwest to which most visitors are exposed is the least natural as the lakes that are the region's principal feature are entirely man-made. Visitors, while perhaps being aware that the lakes are man-made, nevertheless rated the contribution of this domain to their visit satisfaction more highly than respondents from any other area save the Franklin - Lower Gordon.

Beyond Nature/Discovery, and significantly less important to visit satisfaction, was a group of three domains with scores of roughly equal magnitude: Social Contact (concerned with in-group socializing and shared experiences), Exercise/Physical Fitness (concerned with physical activity and the satisfactions that may accompany exertion), and Escape (a wide ranging domain concerned with escape from social and/or physical pressures to experience peace, quiet and solitude) (Table 5.2).

Social Contact (domain 6) is the first of these domains, and the opportunities found within all of the wilderness parks for the sharing of in-group experiences are of major importance to visitors. The parks provide important locations for the pursuit of social activities with the number of out-group contacts arising from current use levels providing an acceptable degree of crowding for such activities. In fact, out-group contacts (domain 7 - Meeting/Observing People) generally contributed to visitor satisfaction, albeit only slightly (Table 5.2).

Regardless of the area visited, the contribution of opportunities for in-group social contact to visit satisfaction was similar.

Of generally equal importance to the social aspects of participation was the perception that this participation contributed to feelings of physical health and wellbeing (domain 11). Respondents from each park area scored the items in this domain very similarly in spite of the obvious differences in the amount of physical activity actually performed by those spending ten days rafting a wilderness river as compared with those sightseeing from a tour bus. As such, it is apparently not the amount, duration, or intensity of physical activity undertaken, but the perception of that activity that provides the satisfaction. It would also be probable that the definition of fitness and

exercise would vary considerably between those undertaking vigorous wilderness pursuits and those on a casual visit to a park.

The last domain within this group of three similarly scored domains was Escape (domain 12). This domain encompasses items relating to escape from social or physical pressures, daily routines, anxiety, and noise and the finding of solitude, peace, tranquility, and isolation. The most highly scored items within this domain related to experiencing peace and tranquility, and escape from the noise and routine of everyday life. These outcome items were second in overall importance only to those items relating to nature and scenery. The importance of opportunities to experience peace, tranquility, and the absence of noise was common to respondents from all areas but was not dependent on the exclusion of other participants from their immediate vicinity.

Even though the overall mean of this domain (Escape) is equivalent to the previous two (Social Contact and Exercise/Physical Fitness), there was one notable exception to the general homogeneity of scoring among the different park areas. While visitors to all four of the general use park areas scored this domain similarly, with the four means being in the range of $1.94 \pm .03$, participants from the Franklin - Lower Gordon scored this domain much more highly, producing a mean of 2.23 (Table 5.2). This contrasts with

the scoring of the Social Contact and Exercise/Physical Fitness domains where the scores from all park areas were in the same range.

The higher mean score for the Escape domain, in the case of the Franklin - Lower Gordon, is largely due to rafters' attributing greater significance to those outcome items relating to feelings of solitude and isolation than did participants in general use areas.

While all survey participants clearly felt that the area provided valuable opportunities to escape their normal routines and worries and to find peace and quiet, those who rafted the Franklin - Lower Gordon felt that the absence of other people and the feeling of isolation from development made important contributions to this peace and quiet. In spite of this positive scoring for outcome items relating to isolation and absence of other people, participants from the Franklin - Lower Gordon rated domain 7 (Meeting/Observing People) more positively than participants from any other park (Table 5.2).

It would appear that those rafting the Franklin - Lower Gordon both enjoyed the isolation and the fact that there were few encounters with other participants, but regarded the encounters that did occur as positively contributing to their visit satisfaction. That outgroup encounters positively contributed to visit satisfaction rather than

detracting from it would indicate that current use levels are generally perceived as appropriate with visitor density either approximating user expectation or being lower than expected.

The strongly positive scoring of the domains labelled Stimulation/Renewal (the wilderness parks as stimulating and exciting) and Achievement (skill development and use) indicate a perception on the part of visitors that these areas present significant opportunities for stimulation and inspiration as well as opportunities for the development and use of outdoor skills.

Predictably, given the arduous nature of the trip, those visiting the Franklin - Lower Gordon scored Achievement (domain 1) much more highly than participants from any other park. Nevertheless, Achievement was one of the domains to have an overall mean of greater than one. This relatively high scoring of the Achievement domain by participants from the general use parks occurred in spite of the fact that a large proportion of them are short-term day users (sightseers and picnickers), who rarely venture far from the immediate vicinity of the visitor service areas. Even so, they scored the experiencing of feelings of achievement almost as highly as they did feelings of renewal and stimulation.

As was the case with domain 12 (Escape), Lake St Clair,

Cradle Mountain, Mount Field, and the Southwest participants returned scores for the Achievement domain that were not significantly different from one another, while participants from the Franklin - Lower Gordon scored the Achievement domain significantly higher than did the other participants. The same was generally true for Stimulation/Renewal (domain 10) with the exception that participants from the Southwest scored this domain more highly than did participants from the other general use areas (Table 5.2). The major difference in the scoring was that while these two domains were of low relative importance (ranking sixth or seventh) to visitors to the general use areas, for rafters, experiencing the feelings encompassed within the Achievement domain was the second most important component of visit satisfaction with Stimulation/Renewal following third.

The low overall mean for the Family domain must be considered in light of the very large proportion of visitors to the region who did not arrive in family units and would have assigned those items within this domain very low scores. Were family units considered in isolation, the overall mean for this domain would have been very much higher.

The final domain to have a mean score significantly greater than 1.00 was Freedom (release from the demands and obligations of society). The remaining five domains, Introspection, Autonomy (being in charge), Meeting/Observing

People (out-group contacts), Risk Taking, and Equipment (its use and display) all scored positively but weakly. No item scored negatively.

Only two of the domains were scored similarly regardless of which park the respondent had visited. Social Contact (domain 6) and Exercise/Physical Fitness (domain 11) were considered by participants to have contributed equally to visit satisfaction throughout the region. As such, if acting as 'rational' consumers, participants would not be expected to select one area over another solely on the basis of opportunities for the achievement of these particular outcomes, all other things being equal.

While the outcome profiles of the general use park areas were similar, the outcome profile for the Franklin - Lower Gordon differed significantly from all other areas in both its pattern (relative importance of each of the domains) and the relative magnitude of the domain scores (Figure 5.1).

Beyond the common primary emphasis on Nature/Discovery, the order of importance of the domains for Franklin - Lower Gordon participants, as reflected in the mean scores, differed markedly from that of participants in the other areas. Among Franklin - Lower Gordon participants, domain 1 (Achievement) ranked second in importance with a mean of 2.6. Among participants in all other study areas, Achievement ranked seventh with a mean of 1.49 $\pm$0.1

Just as participants from Cradle Mountain, Lake St Clair, Mount Field and the Southwest followed one or two highly ranked or primary domains with a grouping of similarly but lower scored domains, so too did participants from the Franklin - Lower Gordon. But the constituent domains within the similarly scored group differed significantly. Instead of this secondary group consisting of domains 6, 11 and 12 (Social Contact, Exercise/Physical Fitness and Escape), users of the Franklin - Lower Gordon scored domains 3, 10 and 12 (Risk Taking - 2.27, Stimulation/Renewal - 2.38, and Escape - 2.23) fairly closely with the two additional domains, Social Contact (domain 6) and Fitness (domain 11) following at 2.12 and 2.11 respectively and with the domain scores rapidly declining thereafter.

The picture that emerges is one of there being a single dominant contributor to visit satisfaction - the perceived "naturalness" of the region. In the case of three of the four general use parks, this is then followed by a grouping of three equally important experience opportunities, those labelled Social Contact, Exercise/Physical Fitness and Escape with the mean scores for the remaining domains rapidly diminishing thereafter. For the Southwest, opportunites related to Family were included among the highly valued domains. For those visiting the Franklin - Lower Gordon, after "naturalness", the important contributors to visit satisfaction were Achievement,

followed by Stimulation/Renewal, Escape and Risk, and finally Social Contact and Exercise/Physical Fitness.

On the basis of the grouped scores of participants, that is, taking no account of any differences in activities undertaken, it is clear that, with the exception of the Franklin - Lower Gordon, all of the park areas provide what are perceived to be essentially similar experience opportunities. The Franklin - Lower Gordon was exceptional in that, not only was the profile of valued domains different from that of the general use parks, but the means of the highly valued domains were significantly higher than those of the other areas.

The picture that emerges from the examination of the outcome profiles is that, with regard to at least two of the outcome domains (Social Contact and Exercise/Physical Fitness) participants do not perceive any differences in the opportunity settings available in the wilderness parks. Furthermore, with the exception of the Franklin - Lower Gordon, the experience profiles that participants associate with recreation engagements in each of the wilderness parks are remarkably similar. This similarity persists in the face of differing degrees of ease of access, both to and within the parks, differing levels of services and amenities, and differing levels of management presence.

In spite of the differences in managerial input,

development, and access, the resulting settings within the general use parks were not sufficiently different to result in gross differences in the perceptions of users as reflected by the outcome scores. The strongest perceptions of survey participants were of the parks' natural qualities, the peace, quiet and tranquility of the areas, the potential for skill development and use to be found within them, and the opportunities to engage in social interaction. The region is thus seen as providing, with the one exception, a relatively homogeneous range of experience opportunities.

V.2. Outcome Profiles and the Activity - Setting Categories:

As each of the parks within the region was seen by participants as providing a fairly common range of experience opportunities, with all of the parks, except the Franklin - Lower Gordon apparently supporting the pursuit of similar experience outcomes, the non-significant between park variation was ignored and participants in similar activity settings were grouped together to examine the between activity - setting variation in outcome profiles. This was done on the basis of the similarity in overall park outcome profiles reflecting the similarity of the outcome profiles associated with the activity - settings common to each park. It was assumed that the major differences evident between the Franklin - Lower Gordon and the other park areas arose from the Franklin - Lower Gordon's providing a specialised activity - setting (wilderness

rafting) not provided by the other park areas.

While the parks are essentially uniform in terms of the range of experience opportunities supported, no park is internally homogeneous in physical, social or managerial terms and therefore within each park the possible experience opportunities should vary.

One of the underlying premises of recreation opportunity planning and experience based setting management is that participants seeking different experience outcomes have different setting preferences (Manfredo, Driver and Brown 1983). It follows that if those setting preferences are sufficiently strong, all other things being equal, those preferences should be reflected in participants' choices among available settings. Therefore, settings which are perceived by participants to be different should also be perceived by participants to provide different experience opportunities.

Domain means were calculated for seven groups: daywalkers, picnickers, sightseers, developed area campers, bushwalkers, rafters 1981/1982, and rafters 1982/1983. Rafters were split into two groups to allow comparison over the two seasons of the study. The rationale behind the splitting was the potentially significant change in outcome profile that might have occurred as a result in changes in the pattern of use of the river, the composition of rafting parties, the growth

in the number of parties on the river, and the change in the proportions of private and commercial parties involved.

Six of the groups, defined in terms of general activites and settings, reflect the choices of participants, not only for activities but also for particular physical, social, and managerial settings. From a managerial standpoint, these activity - settings are clearly different and readily identifiable with general loci that could attract different treatment in accordance with the experience opportunities they provide as identified by participants. From a participant viewpoint, if each of these activity - settings is perceived to afford different experience opportunities, then a comparison of the domain scores should reveal different patterns.

The analysis of the domain means by activity - setting category as opposed to park areas reveals far more variability in scoring (Table 5.3). There were significant differences among the activity settings for all outcome domains with the exception of domain 13 (Freedom) where, in spite of the popular image of wilderness as being an area where rules and regulations do not apply and participants can be free from the demands and obligations of everyday life, rafters did not associate feelings of being obligation-free with their engagement any more strongly than did any other grouping.

TABLE 5.3

ANALYSIS OF VARIANCE SUMMARY

DOMAINS	GROUP MEANS	RESIDUAL	F	PROB.
1. Achievement	R1(2.6) R2(2.6) BW(2.3) C(1.6) DW(1.4) S(1.1) P(1.0)	0.9827	57	**
2. Autonomy	BW(1.5) R1(1.3) R2(1.1) C(0.9) DW(0.7) S(0.7) P(0.4)	1.619	7.2	**
3. Risk Taking	R1(2.3) R2(2.3) BW(1.2) C(0.6) S(0.6) DW(0.4) P(0.3)	1.118	100	**
4. Equipment	R1(0.7) BW(0.6) R2(0.6) C(0.4) S(0.4) P(0.4) DW(0.1)	1.040	6.4	**
5. Family Togetherness	C(2.1) P(2.1) DW(1.7) S(1.7) BW(1.2) R2(0.1) R1(0.1)	1.641	63	**
6. Social Contact	BW(2.3) R1(2.2) P(2.2) R2(2.1) C(2.0) DW(1.9) S(1.7)	1.345	2.6	*
7. Meeting/ Observing People	R2(1.5) BW(1.1) C(1.0) S(1.0) R1(0.9) P(0.8) DW(0.5)	1.955	10	**
8. Nature/Discovery	R1(3.1) R2(3.0) BW(2.9) C(2.6) DW(2.6) P(2.4) S(2.3)	0.7827	13	**
9. Introspection	R1(1.5) R2(1.4) BW(1.4) C(1.0) DW(0.8) S(0.7) P(0.6)	1.343	10	**
10. Stimulation/Renewal	R1(2.5) R2(2.3) BW(2.0) C(1.7) DW(1.6) P(1.4) S(1.3)	1.239	20	**
11. Exercise/ Physical Fitness	BW(2.8) R2(2.1) C(2.1) R1(2.1) DW(2.0) P(1.5) S(1.4)	1.373	7.9	**
12. Escaping Social/ Physical Pressures	R1(2.5) BW(2.4) R2(2.2) C(2.0) DW(2.0) S(1.7) P(1.7)	0.8339	11	**
13. Freedom	BW(1.5) DW(1.3) S(1.3) C(1.3) P(1.1) R1(1.0) R2(1.0)	2.229	2.1	NS

1. R1 = Rafters 1981/1982 season R2 = Rafters 1982/1983 season BW = Bushwalkers DW = Daywalkers C = Campers (developed) S = Sightseers P = Picnickers
2. In the probability column, NS = not significant, * = significant at the 5% level, ** = significant at the 1% level
3. Groups underlined by unbroken lines are not significantly different according to the formula: LSD = 2 X SQRT [(2 X Residual Mean Square)/40], where 40 is the minimum group size.
4. For the purposes of this table, all domain means rounded to two digits.

In addition to there being a greater range of means for each of the domains when considered by activity - setting rather than by park, straightforward and clearly defined boundaries occurred between groups of participants. Such boundaries occurred with regard to domains 1, 3, and 11 (Achievement, Risk Taking, and Exercise/physical Fitness). For each domain, there were three clear cut groupings of participants (Table 5.3).

With regard to the satisfactions arising from experiences covered by the Achievement domain, rafters from both seasons formed a single indistinguishable group who scored feelings of achievement as very strong contributors to visit satisfaction (mean 2.6). Rafters were then closely followed by bushwalkers who scored Achievement almost as highly (mean 2.3). Finally, a single conglomerate of developed area campers, daywalkers, picnickers and sightseers formed a third group (mean 1.25). All three groups had means for the Achievement domain greater than one, making this domain an important contributor to visit satisfaction for all participants.

Risk Taking was scored in a similar fashion. Once again, rafters formed the first of three internally indistinguishable groups. But in this instance, the second grouping consisted of a grouping of bushwalkers and developed area campers rather than bushwalkers alone, while the final grouping consisting of an aggregation daywalkers,

sightseers, and picnickers. In comparison with the scoring of the Achievement domain, there was greater separation between the groupings, and the intermediate group (bushwalkers and developed area campers) were closer in their valuation of risk to daywalkers, sightseers, and campers, than they were to rafters.

Rafters regarded the experiences associated with Risk Taking as contributing almost as much to visit satisfaction as did the experiences of Achievement (2.3 vs 2.6). The intermediate grouping rated Risk Taking less than half as important as Achievement (0.9 vs 2.3), while the third grouping rated Risk Taking at approximately one third the important of Achievement (.47 vs 1.27). This very low scoring of risk-related experiences indicates that such experiences play only a very minor role in the visit satisfaction among these participants, and that the satisfaction value of risk related outcomes is an excellent discriminator.

Finally, the Exercise/Physical Fitness domain revealed that bushwalkers were the group most satisfied by exercise and feelings of fitness that came from backpacking their shelter and supplies into the interior of the parks. The importance of this domain to bushwalkers was second only to the Nature/Discovery domain (2.8 vs 3.1). Rafters, developed campers, and daywalkers formed a second grouping for whom such feelings were either less apparent or less satisfying.

Sightseers and picnickers, the most sedentary of participants, formed the third grouping. Despite their sedentary nature, this latter grouping considered the outcomes associated with exercise as positively contributing to visit satisfaction to the extent of scoring it well above the 1.0 level.

Beyond these three domains, the association of like scoring groups of participants was less straightforward. The pattern of there being three significantly different groupings of participants persisted, but these groupings were not so clear cut, nor were they mutually exclusive.

One of these domains, Family Togetherness, was scored in a generally reverse pattern to the remainder of the domains. The participants whose usage of the parks was limited to the vicinity of the service areas (developed area campers, picnickers, daywalkers, and sightseers) formed the first grouping, scoring Family Togetherness highly (mean 1.9). The two groups of rafters formed the second grouping at the opposite end of the spectrum with a score approaching zero (mean 0.1). The intermediate grouping (mean 1.5) consisted of those participants from the first grouping who were least likely to be in family units (sightseers and daywalkers) and bushwalkers. From the scoring of this domain, it is clear that family usage, and the satisfactions that accompany it, is concentrated in the easy access areas. Sightseeing, daywalking, and bushwalking may also involve family

participation but not to as great a degree and such participation drops off as the locus of participation moves to the park interiors. Virtually no participants who were rafting considered outcomes within this domain relevant to their visit satisfaction.

Domain 8 (Nature/Discovery), the domain that was scored most highly by all respondents, revealed three groupings of participants whose scoring of this domain made them internally indistinguishable. The first grouping consisted of those who were exposed to park interiors beyond the immediate visitor service areas: rafters and bushwalkers. This grouping of users scored the domain most highly (mean 3.0). The second grouping was distinct from the first and consisted of those whose penetration into the park areas was limited to the visitor service areas: developed area campers, daywalkers, picnickers, and sightseers. These participants, as a grouping, scored this domain significantly lower than did the rafters and bushwalkers (mean 2.47). The third grouping was an intermediate one consisting of bushwalkers, developed area campers, and daywalkers (mean 2.7). These participants could be considered to be acting on the periphery of developed areas with varying proportions of their time spent well away from the visitor service area or installed facilities such as huts. While the members of this group were statistically similar to one another, the range of their scoring resulted in the group outlyers having means that overlap with the

more extreme groupings.

Domain 9 (Introspection) returned a result similar to that of domain 8. Again, those using the interior of the parks formed the first and higher scoring grouping, while those whose visit was centred around the service area formed the second. The intermediate grouping, on this occasion, was formed by the bushwalkers and the developed area campers. While the common factor linking the members of the groupings formed with respect to domain 8 is location, the factors that might conceivably link these groups of participants are visit duration as well as location.

The first grouping of participants visited interior areas and had visit durations of two to three days, in the case of bushwalkers, and between eight and ten days for rafting trips. The second grouping was of visitors whose use of the park was confined to an area extending out to a distance of one day's walk from the service area and tended to have much shorter visit durations. Even developed area campers averaged visit durations of less than two nights. The intermediate group consisted of bushwalkers and developed area campers whose visit durations tended to be of similar length and who occupy areas which generally have similar levels of development.

Other domains that followed this pattern included domain 2 (Autonomy) and domain 10 (Creativity), although domain 2

showed an even greater degree of overlap than occurred with other domains, with developed area campers belonging to all three groupings.

Domains 4, 6, 7, and 12 (Equipment, Social Contact, Meeting/ Observing People, and Escaping Social/Physical Pressures) were scored in such a fashion as to reveal only two large and greatly overlapping groupings of participants. This pattern, and the absence of strong delineating boundaries, reflects a gradual transition of outcome valuation through the various activity - settings. As a result, these domains, while being of major importance to participants, particularly domains 6 and 12, do not assist in easily discriminating between the groups of participants.

Somewhat surprisingly, the participant groups that scored domains 6 and 7 (Social Contact and Meeting/Observing People) most highly were those groups whose visits were spent in the interior of the park areas. Social Contact (involving shared experiences among in-group members) was scored highest by bushwalkers and lowest by sightseers, although the overall differences were minor. Meeting/Observing People was also scored most highly by those using the interior of the park areas.

While those using the interior areas had far fewer out-group contacts and might be expected to consider such contacts as detracting from their visit satisfaction, this was not the

case. This is not to say that because the frequency of out-group contacts contributed positively to visit satisfaction that a higher frequency of such contacts would not rapidly degrade visit satisfaction.

The high degree of overlap that occurred in the scoring of the thirteen domains is indicative of the reality that the parks provide a continuous spectrum of opportunities and not a series of discrete and easily delineated activity - settings. As a result, the outcome profiles generated by participants in the seven nominated activity - settings have a large number of comparable points.

Because of the amount of overlap and the manner in which the various activity settings were associated with one another depending on the particular domain being considered, a multivariate analysis was performed in order to indicate which groupings displayed significantly different overall profiles. The analysis of the domain scores of the participant groups indicates that while there are significant differences in the domain scores arising out of the various activity settings, the numeric value of Wilks' Lambda reveals that a considerable amount of the variance in the domain scores is not explained by the assigned activity setting. As such, it is unlikely that would-be participants have clearly different expectations of probable outcomes for the activity - settings as they have been defined (Table 5.4).

TABLE 5.4

MULTIVARIATE ANALYSIS OF VARIANCE AND CANONICAL VARIATE ANALYSIS OF DOMAIN SCORES

Wilks' A	0.3729
Degrees of Freedom	
between groups (t)	6
residual (r)	987
Number of Variables (p)	13
Test Statistic $[r - \frac{(p-t+1)}{2}]\ln(A)$	970
Degrees of Freedom (pt)	78
P-value	<0.01

Eigen Values	
first	1.24 (87%)
second	0.08 (6%)
third	0.07 (5%)

Canonical Variate Means	C1	C2
rafters 81/82	-0.84	0.37
rafters 82/83	-0.82	-0.22
bushwalkers	0.81	0.53
picnickers	1.45	-0.47
daywalkers	1.56	0.14
campers	1.57	-0.04
sightseers	1.80	-0.35

Three significant groupings: (1) rafters (both years)
(2) bushwalkers
(3) all others

Within each grouping, there was no significant difference between groups, while every group within each grouping was significantly different from every group in either of the other groupings. (Significance judged through the use of the standard test applied to Mahalanobis distances).

An examination of the canonical variate means of the participant groups on the first two discriminant functions reveals that there are basically three major groupings of participants who generated identifiably different outcome profiles. These three major groupings consist of rafters, bushwalkers, and developed area users (sightseers, picnickers, daywalkers, developed area campers).

The mathematical proximity of the participant groups can be displayed graphically in terms of their positions as defined by their means on these first two discriminant functions (Figure 5.2). Their positions relative to the three domains which serve as the most important discriminators (Family Togetherness, Achievement, and Risk Taking) can also be illustrated. The similarities among the participant groups become more apparent when their positions relative to the lines representing the principal discriminating domains are considered.

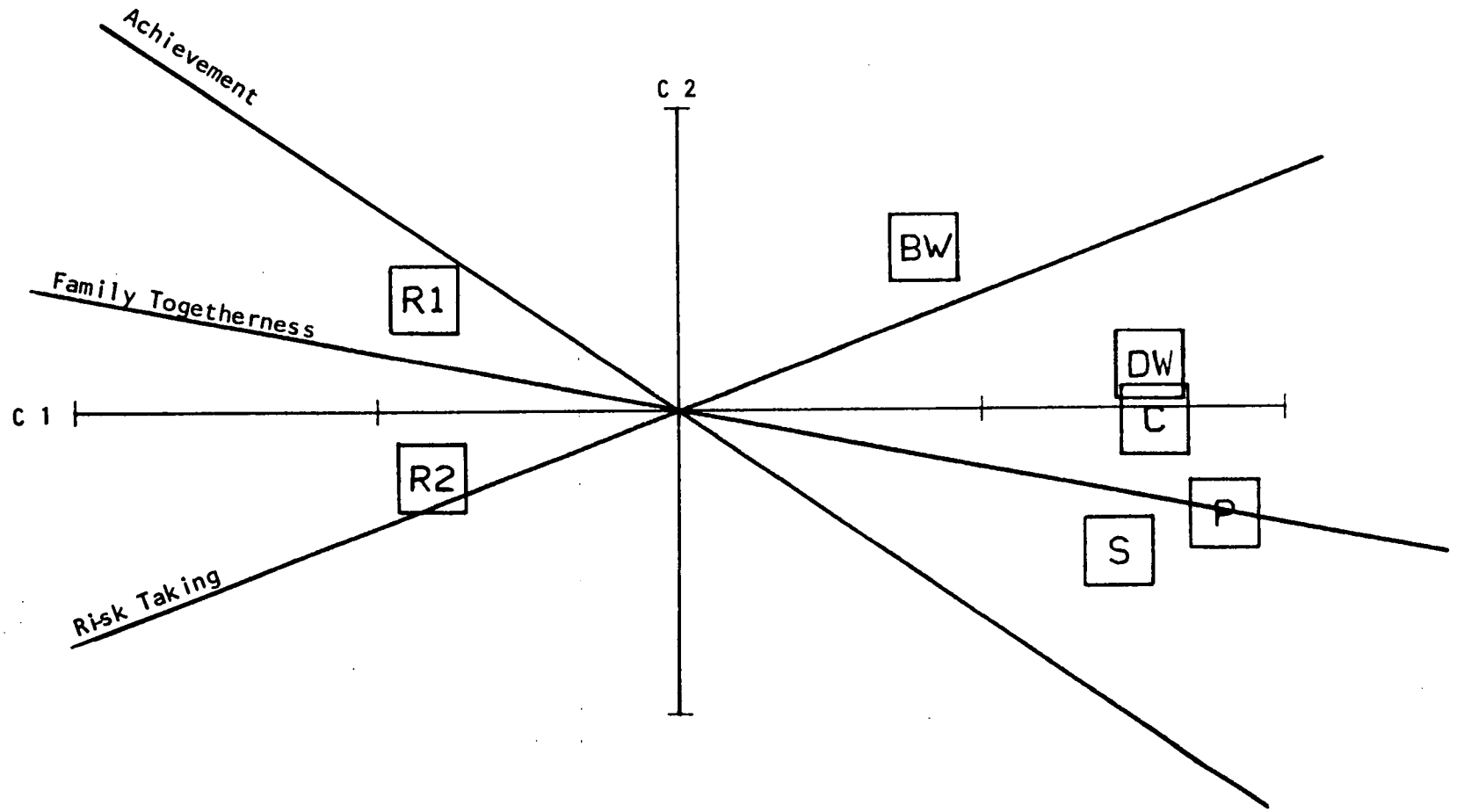
Rafters from both seasons are located in close proximity while being isolated from all other participant groups; bushwalkers appear as a participant group that is not closely associated with any other; and daywalkers, developed area campers, picnickers, and sightseers form a third closely linked group.

These groupings, and the importance of the domains from

FIGURE 5.2

PLOT OF PARTICIPANT GROUPS ON THE

FIRST TWO DISCRIMINANT FUNCTIONS


Achievement
C 2
BW
Family Togetherness
R1
DW
C 1
C
R2
P
S
Risk Taking

which the group positions are derived, reflect the conditions under which participation occurred. Rafting is undertaken in the most remote of park areas. Facilities are non-existent; there is a strong element of physical danger involved in both running the rapids and in negotiating the high portages; participants must rely entirely on their own resources and resourcefulness; and given the difficult nature of the portages, individual party members must rely heavily on other members of the party. Predictably, rafters scored the domains relating both to achievement and risk as being significantly more important contributors to visit satisfaction than any other group while scoring the domain associated with family relationships and experiences very lowly.

The greatest proportion of bushwalking that is undertaken in Lake St Clair, Cradle Mountain, Mount Field, and the Southwest takes place in areas that, while remote, are not totally without facilities. The most popular bushwalking areas would be those associated with the Overland Track linking Cradle Mountain and Lake St Clair and this track is well marked, heavily travelled to the extent of being overused in some sections, and served by a number of huts which provide rudimentary shelter. Extended walks within the parks tend to be physically demanding but, provided adequate equipment is carried, the element of risk is very low. Accordingly, bushwalkers scored the achievement domain quite highly and risk well below that of the rafters. The low risk

factor, shorter duration, and the lower level of strength and skill required allows for much greater family participation and the Family domain is scored far more highly than in the case of rafters.

The remaining participant groups are limited in their use of the parks to the areas immediately adjacent to the visitor service centres. For these users, risk is not a relevant component of the engagement and the level of achievement associated with the activities engaged in, is quite minor. The major proportion of family groups confine their activities within the parks to those within this grouping and this is reflected in the very high scoring for the Family domain.

Combining the outcome scores of the participant groups into these three major categories, the domains which show the greatest range of scores are the major discriminators: Achievement, Risk Taking, and Family Togetherness (Table 5.5). These major discriminators are not necessarily the outcome domains which made the greatest contributions to visit satisfaction, only those where the greatest differences in scoring occurred.

Among rafters, as was the case with all participants, Nature/Discovery was the single most important domain (3.04) although rafters were the only participant group for whom the domain mean was in the "strongly" contributed to visit

TABLE 5.5

OUTCOME DOMAIN MEANS IN ORDER OF IMPORTANCE BY PARTICIPANT GROUPING

RAFTERS	BUSHWALKERS	PICNICKERS/DAYWALKERS/ SIGHTSEERS/CAMPERS
N=633	N=59	N=301
Nature/Discovery (3.04)		
ΔΔΔ	X > 3.0 VERY STRONGLY CONTRIBUTED TO VISIT SATISFACTION	ΔΔΔ
Achievement (2.60)	Nature/Discovery (2.89)	Nature/Discovery (2.51)
Stimulation/Renewal (2.38)	Exercise/Physical Fitness (2.76)	
Risk Taking (2.27)	Escaping Social/Physical Pressures (2.43)	
Escaping Social/Physical Pressures (2.23)	Stimulation/Renewal (2.39)	
Social Contact (2.12)	Social Contact (2.31)	
Exercise/Physical Fitness (2.11)	Achievement (2.26)	
ΔΔΔ	3.0 ≥ X > 2.0 STRONGLY CONTRIBUTED TO VISIT SATISFACTION	ΔΔΔ
Introspection (1.41)	Autonomy (1.51)	Social Contact (1.91)
Meeting/Observing People (1.26)	Introspection (1.36)	Escaping Social/Physical Pressures (1.89)
Autonomy (1.20)	Freedom (1.27)	Exercise/Physical Fitness (1.87)
	Risk Taking (1.20)	Family Togetherness (1.82)
	Family Togetherness (1.18)	Stimulation/Renewal (1.56)
	Meeting/Observing People (1.07)	Achievement (1.32)
		Freedom (1.28)
ΔΔΔ	2.0 ≥ X > 1.0 MODERATELY CONTRIBUTED TO VISIT SATISFACTION	ΔΔΔ
Freedom (.99)	Equipment (.62)	Introspection (.81)
Equipment (.64)		Meeting/Observing People (.73)
Family Togetherness (.12)		Autonomy (.73)
		Risk Taking (.48)
		Equipment (.25)
ΔΔΔ	1.0 ≥ X > 0.0 SLIGHTLY CONTRIBUTED TO VISIT SATISFACTION	ΔΔΔ

satisfaction category. This was followed by Achievement (2.60) and the domains Stimulation/Renewal (2.38), Risk Taking (2.27), Escaping Socal/Physical Pressures (2.23), Social Contact (2.12), and Exercise/Physical Fitness (2.11) all of which were scored as at least "moderately" contributing to visit satisfaction (Table 5.5).

Bushwalkers scored Nature/Discovery slightly lower than did rafters (2.89) followed closely by Exercise/Physical Fitness (2.76), and then Escaping Physical/Social Pressures (2.43), Stimulation/Renewal (2.39), Social Contact (2.31), and Achievement (2.26), all within the "moderate" category.

Among the final grouping (picnickers, daywalkers, sightseers, and developed area campers) only Nature/Discovery was scored within the "moderate" category, with all other domains having means within the "slightly" contributed to visit satisfaction category or below.

V.3. The Outcome Profiles of Wilderness Rafters:

There are a number of ways to sort rafters into managerially significant groups on the basis of characteristics that are easily determined and which are likely to reflect differences in both the behavior of the participants and their specific needs. One of the most immediately important of these is based upon the way in which the rafting party

was organized, that is, as part of a commercial package tour operation, as a club or society expedition under the aegis of an organization established for the purpose of pursuing outdoor activities (a rafting or canoe club), or as an activity planned and organized by a group of friends.

This particular categorization of rafters, on the basis of party type, is significant because of the differences in management and control by organizers, their patterns of river use, group size, campsite selection, the ease of communication for information dissemination, and the approaches, both current and potential, to be used by management to monitor and control use.

As a result of differences in party organization, while the physical environment remains the same for all types of groups, the managerial and social environments may be quite different. Yet, in spite of the differences in party characteristics, a comparison of the outcome profiles of the private (non-organizational) parties and of the commercial parties, who together account for approximately 95% of rafters, illustrates the very strong similarity in their overall outcome profiles (Figure 5.3).

Among the outcome domains with means greater than 1.0 (moderately contributed to visit satisfaction), differences in scoring between private and commercial party members appear in four areas: Autonomy (D2), Risk Taking (D3),

Social Contact (D6), and Meeting/Observing People (D7). But, if it is accepted that the most important, that is, the most highly scored items, are those the pursuit of which most strongly influenced the selection of the activity - setting, and that it is normally the expectation of the achievement of a group of only three to five 'satisfiers' that precipitates the decision to participate, then the only domains that are of major importance to the one group but not the other are Social Contact (D6) and Risk Taking (D3).

The outcome domain labelled Social Contact (D6) refers to the sharing of experiences with in-group members as opposed to those members of other groups that might be encountered during the course of the rafting trip. Among private party members, Social Contact (D6) was scored fifth in importance (mean 2.18) behind Nature, Achievement (D1), Risk Taking (D3), and Stimulation/Renewal (D10). Contact with members of other parties, covered by the outcome domain labelled Meeting/Observing People (D7), was rated positively but at a much lower level (mean 1.19). Among commercial party members, these two outcome domains were scored very similarly (means of 1.76 and 1.73 respectively) but neither was among the five most highly scored domains.

This difference partly reflects the composition of the two types of parties. Private (non-organizational) parties generally consist of a small group of friends while the commercial parties consist of larger numbers of participants

who, for the most part, would not have met prior to embarking on the trip. For these people, at least at the start of the trip, members of other parties would be no less strangers than most or all of the members of their own party. Thus it is only to be expected that in-group and out-group contacts should be rated similarly by commercial party members. It might also be a fair assumption that social factors, friendship and sharing of experiences, are a less important aspect of the recreation engagement to a participant who chooses to participate as a member of a commercial party than to an individual who organizes an outing with a number of personal friends.

Participants in both types of party rated Risk Taking (D3) as contributing strongly to visit satisfaction but those in private parties scored this domain more highly than did those in commercial parties (mean of 2.33 vs 2.09) and, in relation to other domains, gave it a higher ranking (third in importance vs sixth in importance).

Again, this is likely to have been a reflection of the way the different party types are organized and run. Commercial groups are essentially under the direction and control of the party guide who is responsible for virtually all decisions. Party members would expect that the guide would be aware of all of the risks involved in the trip and would not take unreasonable chances with party members' safety. Private parties, of course, rely upon their own judgement

and will take any chances they choose to take, being responsible for their own safety.

Other differences show up among the less important outcome domains. Private party members derive greater satisfaction of feelings of personal autonomy than do members of commercial parties (respective means 1.19 and .73). This again reflects the fashion in which the commercial parties are organized and run with the party leaders making the decisions and directing the activities of the group in a fairly routine fashion.

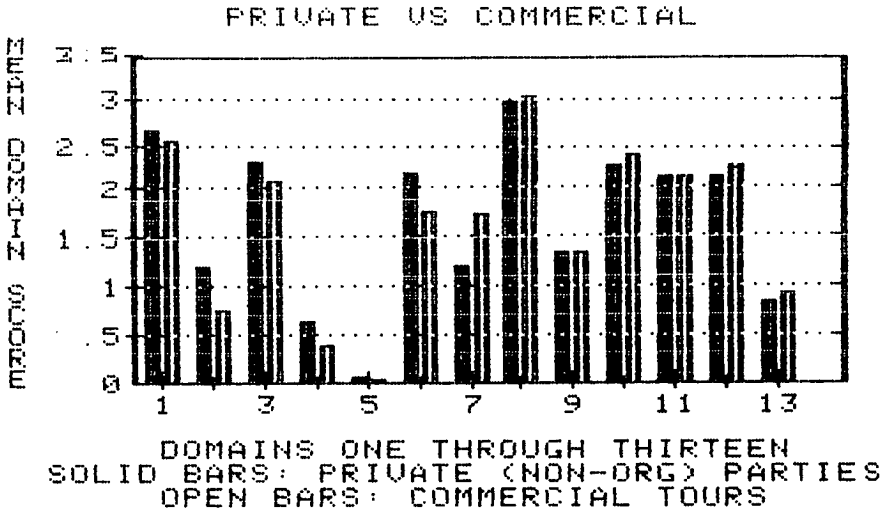
While the outcome profiles of the commercial party participants and the private, non-organizational party participants are very similar, the outcome profile of those in club or society organized parties differs significantly from both (Figure 5.3).

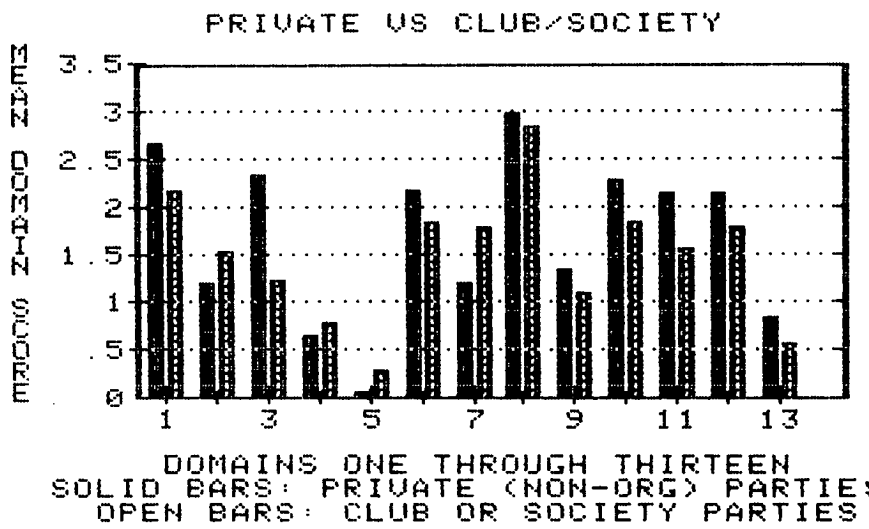
The differences between club or society based parties and the commercial and private, non-organizational parties are primarily differences of magnitude. Nature/Discovery (D8) and Achievement (D1) are still the primary outcome domains although Achievement (D1) is scored significantly lower by club or society based party members than by others. These two domains are the only ones with mean scores greater than 2.0 (strongly contributed to visit satisfaction). In contrast, non-organizational party members scored seven domains above the 2.0 level, and commercial party members,

FIGURE 5.3

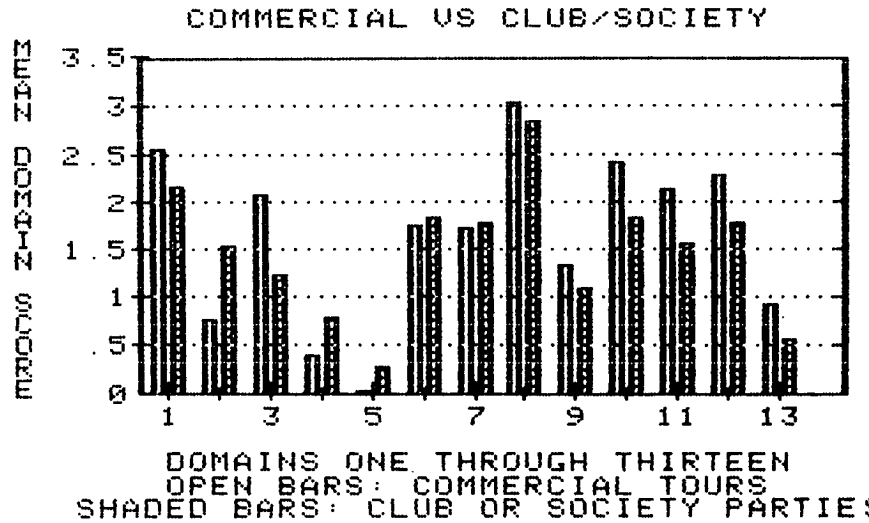
RAFTERS' OUTCOME PROFILES

BY PARTY TYPE





1. Achievement
2. Autonomy
3. Risk Taking
4. Equipment
5. Family
6. Social Contact
7. Meeting/ Observing
8. Nature/ Discovery
9. Introspection
10. Stimulation/ Renewal
11. Exercise/ Physical Fitness
12. Escaping Social/ Physical Pressures
13. Freedom



six.

After Nature/Discovery (D8) and Achievement (D1), next in importance to club or society based parties is a group of four very closely scored domains - Social Contact (D6) (1.84), Stimulation/Renewal (D10) (1.84), Escape (D12) (1.78), and Meeting/Observing People (D7) (1.77).

Of the domains with mean scores greater than 1.0 (moderately contributed to visit satisfaction) club or society members scored the lowest of the three party types on seven out of ten occasions; highest of the three on two occasions (Autonomy (D2) and Meeting/Observing People (D7)); and between the other two groups once (Social Contact (D6)). The most striking differences were that the club or society members scored Risk Taking (D3) far below what either commercial or private party members did and valued Autonomy (D2) far more highly, both in absolute terms. And in relative terms, valued both in-group (Social Contact (D6)) and out-group (Meeting/Observing People (D7)) more highly than did the other two party types. For club or society members, who may regularly undertake such an activity, the feelings of autonomy and social interaction are very important components of the engagement while the recreational value of perceived risk is much less significant.

Beyond categorization based on party type there are a number

of other possibly significant groupings of participants. These include whether the participant is a local resident or from out of state (significant as out-of-state visitors are generally committed to fixed arrival and departure schedules with consequent implications for the imposition of any rationing system); whether they are first time visitors or have rafted the Franklin - Lower Gordon previously and are therefore more aware of its potential hazards; and whether they are newcomers to the activity or are experienced rafters or canoeists.

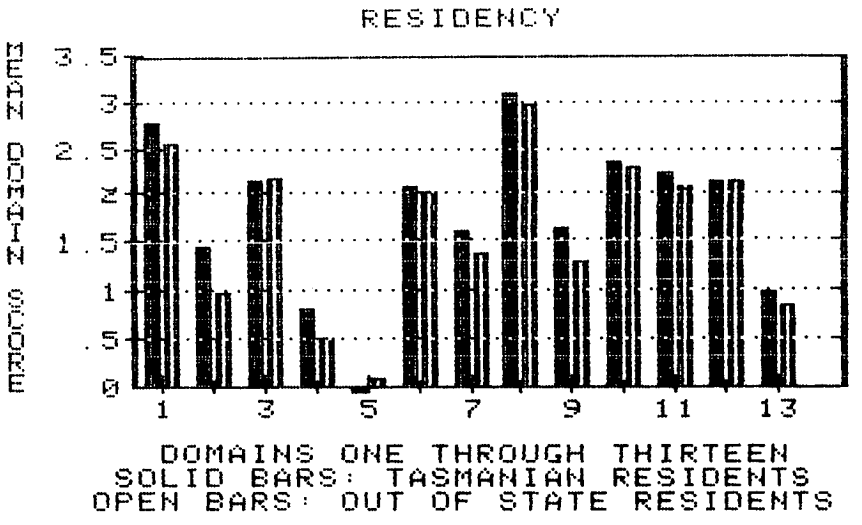
Differences between the domain scores of Tasmanians and mainlanders appeared in two of the major domains (domains with means $\geq$ 2.0), Achievement (D1) and Fitness, and in three of the secondary domains (1.0 $\leq$ mean $<$ 2.0) Autonomy (D2), Meeting/Observing People (D7), and Introspection (D9). In all instances Tasmanians scored these domains more highly than did participants from mainland Australian states (Figure 5.4). Why this should be so is not clear but the difference in scoring persisted even when adjusted for party type, level of experience, and whether or not the participant had visited the river previously.

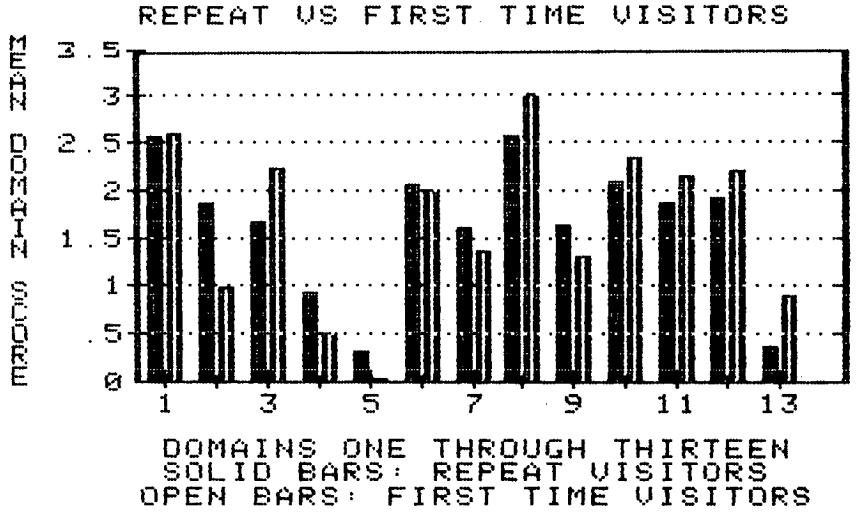
Differences between the scores of first time visitors and those who had rafted the Franklin - Lower Gordon previously showed up in a number of domains. The greatest difference was in Autonomy (D2) but differences also showed up in Risk Taking (D3), Meeting/Observing People (D7), Nature/Discovery

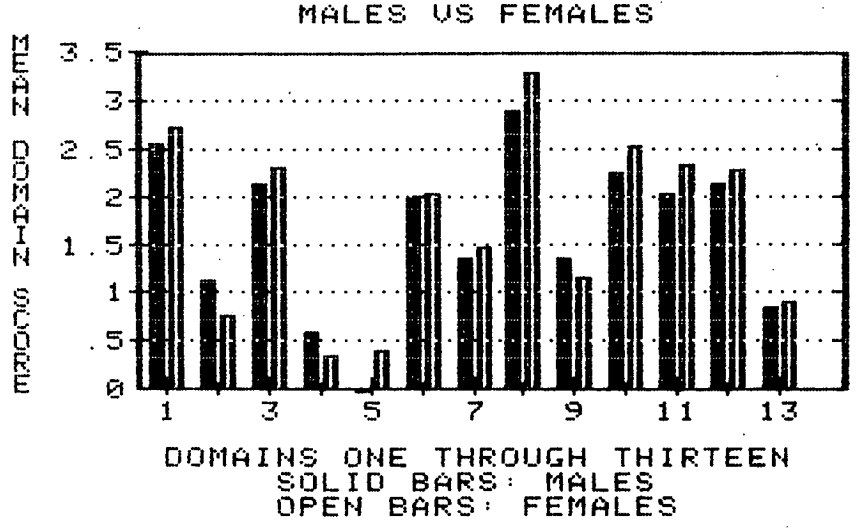
FIGURE 5.4

RAFTERS' OUTCOME PROFILES BY

HOME STATE AND PAST EXPERIENCE







1. Achievement
2. Autonomy
3. Risk Taking
4. Equipment
5. Family
6. Social Contact
7. Meeting/ Observing
8. Nature/ Discovery
9. Introspection
10. Stimulation/ Renewal
11. Exercise/ Physical Fitness
12. Escaping Social/ Physical Pressures
13. Freedom

(D8), Introspection (D9), Stimulation/Renewal (D10), Exercise/ Physical Fitness (D11), and Escape (D12) (Figure 5.4). Some differences in the scoring, particularly those for domain 2, Autonomy (D2), can be discounted due to the type of party that first time visitors and repeat visitors are normally associated with. It is exceptionally rare for a repeat visitor to be participating as part of a commercial group. Excepting group leaders, no commercial party member indicated that they had previously visited the Franklin - Lower Gordon. Repeat visitors are normally found in non-organized groups or club/society groups both of which rate Autonomy (D2) highly.

The valuation of Risk Taking (D3) as contributing to visit satisfaction was significantly lower among repeat visitors. Overall, first time visitors in non-organized parties scored Risk Taking (D3) most highly, followed by first time visitors in commercial parties, repeat visitors in non-organized parties, and finally repeat visitors in club or society run groups. As individual participants showed greater experience, either in rafting generally or specifically with the Franklin - Lower Gordon, their perception of Risk Taking (D3) as contributing to their visit satisfaction decreased.

Those participants who had previously rafted the Franklin - Lower Gordon scored both Meeting/Observing People (D7) and Introspection (D9) more highly than did first time visitors,

and virtually all remaining domains less highly than did first time visitors. It would appear that those who return to repeat a rafting trip either consistently value these two aspects of the experience more highly than do one-time only visitors, or their valuation of these aspects of the experience increases as their rafting experience increases. This same pattern was repeated when only skill level was considered regardless of whether or not the individual had previously been on the Franklin - Lower Gordon.

Finally, the outcome profiles of the participants were examined for possible differences based on age group and sex. No differences were found on the basis of age group but a number of sex linked differences were apparent. Among the major domains (mean ñ 2.0) females consistently scored more highly than did males with marked differences showing up in the scoring on three of the domains: Nature/Discovery (D8), Stimulation/Renewal (D10) and Exercise/ Physical Fitness (D11). Among the secondary domains (means between 1.0 and 1.99) it was the males who scored the domains Autonomy (D2) and Introspection (D9) more highly.

V.4. Discussion:

The analysis of the outcome profiles of the study participants revealed a number of significant results.

The first is that for the region as a whole, by far and away the most important and satisfying aspect of the recreation engagement for all participants, regardless of the park, activity - setting, or any other factor considered, was the opportunity to achieve those satisfactions resulting from experiences coming under the general heading of Nature/Discovery.

The picture that emerges is one of there being a single dominant contributor to visit satisfaction - the perceived "naturalness" of the region. In the case of three of the four general use parks, this is then followed by a grouping of three equally important experience opportunities, those labelled Social Contact, Exercise/Physical Fitness and Escape with the mean scores for the remaining domains rapidly diminishing thereafter. For the Southwest, opportunites related to Family were included among the highly valued domains. For those visiting the Franklin - Lower Gordon, after "naturalness", the important contributors to visit satisfaction were Achievement, followed by Stimulation/Renewal, Escape and Risk, and finally Social Contact and Exercise/Physical Fitness.

On the basis of the grouped scores of participants it is clear that, with the exception of the Franklin - Lower Gordon, all of the park areas provide what are perceived to be essentially similar experience opportunities. The Franklin - Lower Gordon was exceptional in that, not only

was the profile of valued domains different from that of the general use parks, but the means of the highly valued domains were significantly higher than those of the other areas. Moreover, with regard to at least two of the outcome domains (Social Contact and Exercise/Physical Fitness) participants do not perceive any differences in the opportunity settings available in the wilderness parks.

Furthermore, with the exception of the Franklin - Lower Gordon, the experience profiles that participants associate with recreation engagements in each of the wilderness parks are remarkably similar. This similarity persists in the face of differing degrees of ease of access, both to and within the parks, differing levels of services and amenities, and differing levels of management presence.

In spite of the differences in managerial input, development, and access, the resulting settings within the general use parks were not sufficiently different to result in gross differences in the perceptions of users. The strongest perceptions of survey participants were of the parks' natural qualities, the peace, quiet and tranquility of the areas, the potential for skill development and use to be found within them, and the opportunities to engage in social interaction. The region is thus seen as providing, with the one exception, relatively common experience opportunities.

On the basis of the activity - settings considered (daywalking, picnicking, sightseeing, developed area camping, bushwalking, and rafting) the analysis of the domain scores revealed that only three easily distinguishable groups of participants could be established via participant domain scores. These three groups consisted of rafters, bushwalkers, and all others. In each case, the outcome profiles were very different as were the activity - settings. While differences did occur among activity - settings for most domains, the complete profiles were not sufficiently different to allow discrimination beyond the three broad groupings. As a result, in general terms, the activity - settings within each of the three broad groupings afforded similar experience opportunities.

Among rafters, groups established on the basis of readily identifiable and managerially significant characteristics did not show outcome profiles sufficiently different to allow for reliable discrimination, however, important differences in user characteristics were reflected in the means of particular domains and these differences do provide indications of the relative importance of various aspects of the rafting experience to specific user types.

CHAPTER SIX

PARTICIPANT IMPRESSIONS AND VIEWS

The purpose of this chapter is threefold: to examine the impressions and views of those who visited the Western Tasmanian Wilderness Parks; to compare and contrast those views and impressions on the basis of the activity - settings in which participation took place; and to examine the relationship between participants' views and their scoring of the various experience outcome domains.

As part of the first stage of the user study, the mail out questionnaire was used to solicit information from participants in all of the park areas regarding their impressions of the level of development (ease of access, adequacy of signage, and adequacy of facilities), user numbers (estimated numbers, and views on numbers), the general appearance (condition and naturalness), and finally a subjective rating of the park they were visiting when contacted. In addition to information on their impressions, participants were also asked a short series of very general questions on what future conditions of access, development, and management presence they thought would be appropriate.

VI.1. Impressions and Views by Park

VI.1.1. Development:

Three questions were put regarding the current level of development and management presence within the parks. These included: ease of access and movement within the park; adequacy of signage on tracks, trails, and points of interest; and the adequacy of the facilities provided for visitor comfort and convenience.

Mount Field, with its internal roading and its relatively small size, was regarded as having the greatest ease of internal access with 81% of respondents rating access as very easy (Table 6.1). Lake St Clair was also rated as having very easy access by the great majority of respondents even though the roading within the park is quite limited, extending only from the main gate to the lake itself and the visitor service area. In spite of its limited extent, the concentration of use in the immediate vicinity of the visitor service area is such that, for the majority of visitors, vehicle access is of a very high order.

Cradle Mountain and the Southwest had similar overall average scores (weighted average) although the Southwest has a vastly longer road network from the gatehouse (Maydena) to the visitor service areas than does Cradle Mountain.

TABLE 6.1

PARTICIPANT IMPRESSIONS OF PARK CONDITIONS: DEVELOPMENT

WITHIN PARK ACCESS (N=534)

	Very Easy	Moderate	Neither	Dificult	Very Dificult	Wt Avg.
	+2	+1	0	-1	-2	
Cradle Mountain	46.4%	39.1	5.8	7.2	1.4	1.21
Lake St Clair	72.0	21.3	2.7	4.0	0.0	1.61
Mount Field	81.6	16.7	1.8	0.0	0.0	1.80
Southwest	56.1	28.8	3.0	10.6	1.5	1.27
Franklin Lower Gordon	56.0	8.5	11.3	20.6	3.5	0.93

SIGNAGE - TRACKS, TRAILS, AND POINTS OF INTEREST (N=546)

	Very Well Marked	Fairly Well Marked	Poorly Marked	Very Poorly Marked	Unmarked	Wt Avg.
	+2	+1	-1	-2	0	
Cradle Mountain	49.6%	43.2	5.0	0.7	1.4	1.36
Lake St Clair	47.2	51.4	0.0	0.0	1.4	1.46
Mount Field	52.6	36.8	4.4	1.8	4.4	1.34
Southwest	34.8	50.0	10.6	1.5	3.0	1.06
Franklin Lower Gordon	4.5	13.5	10.3	4.5	67.1	0.03

COMFORTS AND CONVENIENCES (N=581)

	Too Many	Right No.	Too Few	Essentials Missing	Wt Avg.[1]
	+1	0	-1	-1	
Cradle Mountain	5.0%	78.4	8.6	7.9	-11.5
Lake St Clair	12.2	82.4	5.4	0.0	6.8
Mount Field	4.4	88.6	4.4	2.6	-2.6
Southwest	4.5	63.3	15.2	16.7	-27.4
Franklin Lower Gordon	1.1	94.1	2.1	2.7	-3.7

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[1] 'too few' and 'essentials missing' both valued at -1 for this average

The response of participants from the Franklin - Lower Gordon was markedly different from those of participants from the other park areas and showed a pronounced split between those who rated access as very easy (56%) and those who rated it as difficult (20.6%). The result of this split was the Franklin - Lower Gordon having the lowest weighted average for ease of access.

The high proportion of respondents rating access as difficult to very difficult (24.1%) was somewhat surprising as the departure point for rafting trips, the Collingwood Bridge, is on the main regional highway which passes through the upper end of the park. One possible reason for the park's poor rating could have been the number of participants who, being unfamiliar with the region, had some difficulty locating the departure point as the sign identifying the Collingwood Bridge as the starting point for rafting trips was ill placed. Another possible basis for respondents giving the park such a rating was the congestion at the raft launching area during peak periods and, depending on water levels, the resulting difficulty in actually getting on to the river.

As was the case with ratings of ease of access, Mount Field had the highest proportion of respondents who gave the park the highest possible rating for signage on tracks, trails and points of interest. Cradle Mountain faired almost as well as Mount Field while Lake St Clair had the highest

average rating of all the areas (Table 6.1). The Southwest rated very poorly relative to the other general use parks and, predictably, the Franklin - Lower Gordon, with its minimal signage, scored very lowly with 67% of respondents indicating that the tracks, trails, and points of interest were unmarked.

All areas were considered by the majority of respondents to have an appropriate level of visitor facilities (Table 6.1). In fact, in the case of Lake St Clair an argument could possibly be made for the freezing of further development as 12.2% of the participants in this, one of the more developed parks, were of the opinion that the level of facilities provided was excessive. Lake St Clair was the only park area where the proportion of participants who considered the level of facilities provided to be excessive exceeded the proportion of respondents who believed additional facilities would be in order. Lake St Clair was also the only area where not a single respondent felt that essential facilities were missing.

Of the five park areas, the Southwest had the lowest proportion of respondents who believed that an appropriate level of user facilities was provided and by far the highest proportion of those who felt that essential facilites were missing (16.7%). The next most poorly rated area was Cradle Mountain (7.9%).

The park where the fewest facilites are provided for users, the Franklin - Lower Gordon, where the only installation at the time of the study was a temporary trailer located on the Collingwood River and a number of old emergency shelter huts, had the highest rating with 94% of respondents holding the view that the situation was adequate to meet visitor needs.

At the level of the total sample there was a small number of significant (at the .05 level) but very weak correlations between the scoring by participants of a number of the experience domains and their impressions and views regarding the level of development within the Western Tasmanian Wilderness parks.

With respect to the ease or difficulty of internal park access, there was a weak negative correlation between the perceived ease of access and the contribution of the experience outcomes associated with the outcome domains labelled exercise/physical fitness (-.17), escaping social/physical pressures (-.11) and freedom (-.11) to overall visit satisfaction. Respondents who perceived access within the parks to be more difficult tended to score the abovementioned domains more highly. While the correlation is weak, it may nevertheless provide an indication that for those in pursuit of these particular outcomes, perceived difficulty of access may contribute to the achievement of those outcomes. Improvements to access might therefore be

counterproductive under present circumstances.

There were no significant correlations between the scoring of the outcome domains and the other development related questions.

VI.1.2. User Numbers:

Three questions were put regarding visitor numbers. Participants were requested to estimate the number of other visitors encountered; apply a subjective label to express how frequently encounters occurred; and make a judgement on whether or not the area visited was too crowded.

Lake St Clair was rated as having the greatest number of visitor encounters with 17.6% of the respondents indicating that in excess of 100 other visitors were encountered during the course of the visit (Table 6.2). Mount Field and the Southwest were next in terms of the proportions of respondents reporting such high rates of out-group contacts. Overall, Lake St Clair was the most crowded park with almost half of the respondents (48%) reporting 50 or more other visitors encountered in what was, for most visitors (69.9%), a half day visit. The next most crowded park area was Mount Field with a much lower 33% reporting such a high frequency of encounters.

Without exception the most commonly reported number of

TABLE 6.2

PARTICIPANT IMPRESSIONS OF PARK CONDITIONS: VISITOR NUMBERS

ESTIMATED NUMBER OF ENCOUNTERS (N=610)

	>100	50-100	25-50	10-25	<10
Cradle Mountain	4.3%	19.3	32.1	30.7	13.6
Lake St Clair	17.6	31.1	32.4	16.2	2.7
Mount Field	10.5	22.8	34.2	16.7	15.8
Southwest	10.3	18.2	37.3	23.6	10.6
Franklin Lower Gordon	1.4	12.0	41.7	38.0	6.9

CHARACTERIZATION OF ENCOUNTERS (N=608)

	Very Frequent	Frequent	Occasional	Rare	Very Rare	None
Cradle Mountain	18.1%	42.9	35.0	3.6	0.0	0.0
Lake St Clair	41.3	28.0	26.7	2.7	1.3	0.0
Mount Field	22.8	43.9	21.9	7.0	3.5	0.9
Southwest	22.8	46.2	26.9	0.0	3.1	1.5
Franklin Lower Gordon	7.0	36.0	44.9	6.1	4.7	1.4

WAS THE PARK TOO CROWDED? (N=611)

	Yes	No
Cradle Mountain	17.1%	82.9
Lake St Clair	27.0	73.0
Mount Field	16.7	83.3
Southwest	18.2	81.8
Franklin Lower Gordon	35.9	64.1

encounters was between 25 and 50 although for Cradle Mountain, the Southwest, and the Franklin - Lower Gordon, the next most frequently cited range was from 10 to 25 encounters.

The Franklin - Lower Gordon and Cradle Mountain respondents reported the fewest encounters. For these two park areas 79% and 62% of respondents, respectively, reported between 10 and 50 encounters with other visitors.

In terms of how they would describe the frequency with which other visitors were encountered, Lake St Clair was the only area where the 'very frequent' category was the most commonly selected. For all other general use areas the most commonly chosen term was 'frequent', while participants from the Franklin - Lower Gordon most commonly selected the 'occasional' label. This is in spite of the fact that the actual frequency of encounters on the Franklin - Lower Gordon would be far, far lower than in any of the general use areas as the number of encounters was for an average 10 day trip while visitors to the other park areas averaged a visit duration of one day or less.

In response to the query on their reaction to the number of visitors encountered, those rafting the Franklin - Lower Gordon, in spite of reporting the fewest encounters and having by far the longest average visit durations (approximately 10 days versus less than 1 day for all other

areas), returned the highest proportion of respondents who felt that the area was too crowded (Table 6.2). Among the general use parks, Lake St Clair had the poorest rating while Mount Field had the lowest proportion of those believing the park to be too crowded even though this park had the second highest proportion of respondents reporting 50 or more out-group encounters during their visit.

The subjective judgement of crowding, i.e. those who considered the park area visited as having had too many people present at the time of the visit, showed a significant correlation with three of the domains of experience outcomes: meeting/observing people (-.14), introspection (-.10) and freedom (-.15).

That those for whom out-group contact was a desired experience outcome that significantly contributed to visit satisfaction should be tolerant of, or react positively to crowding was anticipated. It is less immediately obvious why those for whom introspection and feelings of freedom were contributors to visit satisfaction should tend to perceive similar levels of reported encounters as being less crowded than those for whom these outcomes were unimportant. It goes beyond the possibility that those seeking opportunities to engage in introspection and experience feeings of freedom simply did not notice the number of encounters - there was no correlation between the scoring of these domains and the number of reported encounters. Under the circumstances

encountered, it appears that the very presence of other individuals and the frequency of out-group contacts contributed to visit satisfaction perhaps in the sense that some participants were actively seeking to be 'alone in a crowd'.

VI.1.3. Appearance:

Two questions related to the appearance of the park areas. The first was directed at determining participant impressions of the general condition of the areas while the second requested an assessment of how natural the individual park areas were perceived to be.

While all of the parks rated well on both counts, Mount Field was the most highly rated park in terms of its general condition with 81.6% of respondents assessing the park's general condition as very good and 99.1% rating it positively. The Franklin - Lower Gordon was slightly less well regarded with 77.9% rating its condition as very good and 97.6% rating it positively (Table 6.3).

Of all the park areas, only the Southwest had more than 3% of respondents assessing the area visited as being in less than fair condition and in the case of this park the proportion of visitors who were dissatisfied with the condition of the park was quite high with 13.7% rating the area as being in poor to very poor condition.

TABLE 6.3

PARTICIPANT IMPRESSIONS OF PARK CONDITIONS: APPEARANCE AND RATING

GENERAL IMPRESSION OF CONDITION (N=602)

	Very Good +2	Fair +1	Poor -1	Very Poor -2	Wt Avg.
Cradle Mountain	54.7%	42.4	2.2	0.7	1.48
Lake St Clair	60.0	37.3	2.7	0.0	1.55
Mount Field	81.6	17.5	0.9	0.0	1.78
Southwest	42.4	43.9	7.6	6.1	1.01
Franklin Lower Gordon	77.9	19.7	1.9	0.5	1.73

APPEARANCE (N=603)

	Completely Natural +2	Fairly Natural +1	Not Very Natural -1	Not At All Natural -2	Wt Avg.
Cradle Mountain	14.3%	79.3	6.4	0.0	1.01
Lake St Clair	24.0	65.3	9.3	1.3	1.01
Mount Field	21.9	65.8	11.4	0.9	0.96
Southwest	12.1	59.1	15.2	13.6	0.41
Franklin Lower Gordon	73.6	26.0	0.5	0.0	1.73

RATING OF THE AREA (N=610)

	Excellent +3	Very Good +2	Good +1	Avg. 0	Poor -1	Very Poor -2	Terrible -3	Wt Avg.
Cradle Mountain	43.6%	37.1	12.9	5.0	1.4	0.0	0.0	2.16
Lake St Clair	46.7	28.0	22.7	2.7	0.0	0.0	0.0	2.19
Mount Field	47.4	40.4	7.9	4.4	0.0	0.0	0.0	2.31
Southwest	36.9	27.7	21.5	4.6	3.1	4.6	1.5	1.71
Franklin Lower Gordon	90.3	6.9	2.3	0.0	0.5	0.0	0.0	2.86

In terms of the degree to which the area visited struck the participants as appearing to be in a natural state, only the Franklin - Lower Gordon had a majority of participants (73.6%) regarding it as having a completely natural appearance. All remaining park areas had a majority of respondents assessing them as being fairly natural. Again, the Southwest was the poorest rated park with 28.8% of respondents judging the area as being not very natural to not natural at all.

In spite of the pre-eminence of the experience outcome domain labelled nature/discovery as a contributor to overall visit satisfaction, neither the participant perception of the general condition of the area visited nor its perceived naturalness were significantly correlated with participant scoring on any of the outcome domains.

VI.1.4. Area Ratings:

In response to the query on how the respondent would describe the area visited to a friend, only the Franklin - Lower Gordon was rated as being excellent by the majority of visitors and an overwhelming 90.3% of respondents so rated this park (Table 6.3).

On the basis of a weighted average, Mount Field was the next most highly regarded park area while the Southwest was the

most poorly regarded with 9.2% of its visitors rating it negatively.

Overall, the parks rated very highly with only the Southwest having an average in the 'good' to 'very good' range while all other areas were rated in the 'very good' to 'excellent' range.

The participant rating of the area visited showed weak correlations with only three of the experience outcome domains: nature/discovery (.20), escaping social/physical pressures (.22), and exercise/physical fitness (.12). In each instance, the greater the contribution of the abovementioned domains to visit satisfaction, the greater the tendency to rate the area visited more highly.

VI.1.5. Future Access:

In response to the question of appropriate access in future, participants from Cradle Mountain and the Southwest strongly favored additional gravel roading (57.6% and 50% respectively) followed by sealed roads (25.2% and 31.8% respectively). In the other general use parks, no single road type was so strongly favored. In both Lake St Clair and Mount Field, sealed roads, gravel roads, and the no additional roads option were more equally supported (Table 6.4). Participants from the Franklin - Lower Gordon strongly opposed any additional roading with 83.5% of respondents

TABLE 6.4

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: ACCESS

FUTURE INTERNAL ROADS SHOULD BE (N=561)

	Two Lane Sealed	Gravel Surfaced	FWD Passable	No More Roads
Cradle Mountain	25.2%	57.6	0.7	16.1
Lake St Clair	33.8	32.4	2.7	31.1
Mount Field	25.9	38.4	8.0	27.7
Southwest	31.8	50.0	3.0	15.2
Franklin Lower Gordon	5.1	8.9	2.8	83.5

ALLOWABLE FORMS OF TRAVEL (N=584)

	Any & All Vehicles	FWD Only	Non-Motorised	Foot Only
Cradle Mountain	47.5%	1.4	7.2	43.9
Lake St Clair	44.6	0.0	10.8	44.6
Mount Field	30.1	1.8	21.2	46.9
Southwest	60.0	3.1	9.2	27.7
Franklin Lower Gordon	1.0	3.6	39.4	56.0

WALKING TRACKS SHOULD BE (N=588)

	Signed, Gravelled or Sealed	Signed & Duckboarded	Signed Only	Cairns Only	Unmarked
Cradle Mountain	2.2%	67.5	23.4	8.0	0.7
Lake St Clair	8.1	58.1	21.6	10.8	1.4
Mount Field	6.1	57.9	29.8	5.3	0.9
Southwest	4.6	66.2	21.5	4.6	3.1
Franklin Lower Gordon	0.5	11.1	12.1	42.9	33.3

supporting the no roads option. The possible expansion of low grade roads passable only by 4wd vehicles gained support from only a very small minority of participants.

The rejection of roads developed only to a four wheel drive standard was reflected in the question on allowable forms of travel within the park where the possible creation of areas accessible to four wheel drive vehicles only again gained minimal support. The greatest support was generally split between unrestricted vehicle access and a combined non-motorised or foot only access. The exception was the Franklin - Lower Gordon where unrestricted vehicle access was supported by only 1% of respondents.

With regard to walking tracks, the development of high standard gravelled or sealed walking tracks within park areas gained greatest support from Lake St Clair participants, but this support was a very low 8.1%. The greatest support was reserved for walking tracks to remain as currently established with the addition of improved signage and duck boarding with a significant proportion of respondents favoring only improved signage. Only in the case of the Franklin - Lower Gordon was improvement generally rejected with 33.3% of respondents opting for completely unmarked tracks and 42.9% opting for tracks marked by cairns only.

A preference for lower standards of roading was positively

correlated with four of the experience outcome domains: achievement (.19), risk taking (.21), exercise/physical fitness (.15), and escape from social/physical pressures (.14). It was negatively correlated with one experience outcome domain, family togetherness (-.11).

Similarly, a preference for restrictions on the permissible means of travel within the parks was positively correlated with achievement (.19), risk taking (.12), exercise/physical fitness (.19), and escape (.13). The greater the contribution of these particular experience outcome domains to overall visit satisfaction, the greater the tendency to prefer that visitors be restricted to more primitive, less mechanised forms of travel. Conversely, family togetherness (-.25) and meeting/observing people (-.12) showed negative correlations and a preference for visitors to be allowed the use of more developed, intrusive or mechanised means of transport.

With regard to track development, there was only one significant correlation and that was with the experience outcome domain labelled family togetherness (.18) with those valuing this outcome showing a tendency to advocate more developed tracks and trails.

VI.1.6. Development:

In providing a qualitative assessment of the facilities that

the park areas should have, the response patterns of those participants from the general use parks were broadly similar. Participants from Mount Field and Cradle Mountain were most evenly split between the 'some', 'minimal', and 'safety only' categories, while Lake St Clair and the Southwest had a greater bias towards the 'some' category. The response from the Franklin - Lower Gordon was dramatically different from the other areas with a large majority favoring no facilities whatsoever (Table 6.5).

Cradle Mountain, Lake St Clair and Southwest participants all provided majority support for limited modifications to park areas to allow for increased use with more than 10% from each park going further and supporting 'moderately' extensive modifications. Participants from Mount Field were significantly less supportive of any modifications with 41.2% opposing any such development. The Franklin - Lower Gordon showed the strongest opposition to further modifications with an absolute majority of respondents opting for no modifications to allow for increased use.

A preference for fewer comforts and conveniences was positively correlated to the expressed contribution made to visit satisfaction by the experience outcome domains: achievement (.13), nature/discovery (.15), exercise/physical fitness (.17) and escape from physical/social pressures (.12) and negatively correlated with family togetherness (-.17) and meeting/observing people (-.14).

TABLE 6.5

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: DEVELOPMENT

COMFORTS AND CONVENIENCES REQUIRED FOR SUCH AREAS (N=606)

	Many	Some	Minimal	Safety	None
Cradle Mountain	2.2%	31.1	31.2	34.1	1.4
Lake St Clair	2.7	46.7	13.3	32.0	5.3
Mount Field	0.9	31.6	25.9	39.5	2.6
Southwest	6.1	43.9	18.2	25.8	6.1
Franklin Lower Gordon	0.0	0.5	1.9	36.6	61.0

MODIFICATIONS TO ALLOW FOR INCREASED USE (N=605)

	Very Extensive	Moderately Extensive	Strictly Limited	No Modifications
Cradle Mountain	0.7%	10.7	62.1	26.4
Lake St Clair	2.7	12.0	64.6	21.3
Mount Field	0.9	9.6	48.2	41.2
Southwest	1.5	10.8	72.3	15.4
Franklin Lower Gordon	0.0	1.4	39.3	59.2

There were no significant correlations between views on modifications to support increased use and any of the outcome domains.

VI.1.7. Controlling Use/Preventing Damage:

In the general use areas, the most popular suggested means of limiting user impact was the closure of areas suffering from excessive use. In both Cradle Mountain and the Southwest, area closure was followed in popularity by the re-inforcing of heavily used areas to withstand increased use while Lake St Clair and Mount Field respondents favored the limiting of user numbers (Table 6.6). In the case of the Franklin - Lower Gordon, the support for limiting user numbers was an overwhelming 92.6% with an almost even split among the remaining three options.

The belief that strict and rigidly enforced regulations should operate in park areas was most strongly supported by participants from the Southwest but also received some support from participants from all general use areas. Only the Franklin - Lower Gordon varied with minimal to no regulations and a strong reliance on the common sense of users being supported by 71.5% of respondents.

There was no significnt correlation between views on means of preventing overuse and any of the outcome domains.

TABLE 6.6

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: CONTROL

BEST WAY TO PREVENT DAMAGE FROM OVERUSE (N=587)

	Limit Numbers	Limit Time	Close Areas	Re-inforce Sites
Cradle Mountain	17.3%	4.5	51.1	27.1
Lake St Clair	31.1	5.4	47.3	16.2
Mount Field	30.1	5.3	45.1	19.5
Southwest	15.4	7.7	56.9	20.0
Franklin Lower Gordon	92.6	2.5	3.0	2.0

RULES AND REGULATIONS SHOULD BE (N=604)

	Strict & Enforced	Moderate	Minimal	Rely on Common Sense
Cradle Mountain	47.1%	33.3	10.1	9.4
Lake St Clair	37.3	38.7	18.7	5.3
Mount Field	44.2	31.9	14.2	9.7
Southwest	53.1	32.8	7.8	6.3
Franklin Lower Gordon	15.0	13.6	21.5	50.0

VI.1.8. Discussion:

The overall assessment that participants gave to the park areas in response to the question of how they would rate the area visited to a friend was generally high with an among park mean of 2.24 on a scale ranging from +3 (excellent) to -3 (terrible). This high level of reported satisfaction is indicative of the settings provided and the experience opportunities available reflecting those being sought by participants.

On the basis of their views and their rating of the area visited, the parks that present overall settings that appear to most closely reflect those being sought by their clientele are the Franklin - Lower Gordon and, from among the general use parks, Mount Field. The park that performed least well in this regard was the Southwest. It must be noted however, that with the exception of the Franklin - Lower Gordon, the views expressed in this section are essentially those of the bulk of the users; the more than 85% of visitors who do not venture beyond a maximum of one day's walk from the visitor service areas.

Conditions within the Franklin - Lower Gordon Wild Rivers National Park were such that even with the poorest access and signage, no additional roading, no additional signage and minimal track marking was desired. Facilities were

almost non-existent and the majority of users considered this level of facility provision to be completely appropriate. The development of further facilities to allow for increased use was strongly opposed and users favored the imposition of controls outside of the park, such as the limitations on the number of entrants, as opposed to controls applied to visitor behavior as means of protecting the area from damage due to overuse. Overall, the park was seen as being the most natural and in good condition and, while the level of out-group encounters was considered too high, more than 90% of respondents rated the area as excellent.

In comparison, Mount Field, the most highly rated of the general use areas, was seen as having the easiest access and had strong support for additional improvement in roading although 68% of respondents favored restrictions on allowable forms of travel. This high level of resistance to mechanised vehicles within the park was second only to that shown by respondents from the Franklin - Lower Gordon.

Mount Field came the closest to having a balance between those who thought additional facilities should have been provided and those who believed the facilities provided were excessive with a very large majority (88%) satisfied with what services were in place. While only being fairly natural, Mount Field was rated as being in the best condition of any of the area including the Franklin - Lower

Gordon and, while having one of the highest rates of out-group encounters, had the lowest proportion of users rating it as too crowded. This general satisfaction with the park conditions and facilities was reflected in the very high level of support for there being no further modifications to allow for additional use.

The Southwest was judged by far the poorest of the parks. Of the general use areas, it had the highest proportion of users rating its access as difficult to very difficult. Its signage was the poorest and more than 30% of respondents felt the level of facilities provided was inadequate. It was the least natural, the most poorly maintained, and achieved the poorest rating of any of the areas. Those who visited the Southwest gave the greatest support for additional roading, mechanised vehicle use, and the strict enforcement of rules and regulations. They also gave the greatest support to area closure as a means of preventing damage due to overuse.

In the case of the Southwest it must be particularly stressed that these are the views of those who do not venture far from those areas with high standard vehicle access. Those participants who visit the area in order to walk in very remote wilderness conditions are a small minority of its total visitation and their views are not well represented in this study.

At one extreme of the primitive - developed continuum, the most primitive area (the Franklin - Lower Gordon) attracted participants who were equally extreme in their views. Rafters had by far the fewest number of reported encounters with other parties but characterised the frequency of such contacts in a fashion similar to participants from other areas who had far higher relative frequencies of encounters. Moreover, in spite of the very low relative number of outgroup contacts, the Franklin - Lower Gordon had the highest proportion of respondents rating the area as 'too crowded'. Rafters rated access, signage, and facilities as very poor but rejected any suggestion of possible 'improvement' while consistently rating the area more highly than participants from any other area.

Clearly, those visiting the Franklin - Lower Gordon were anticipating and demanding a setting with minimal evidence of human intrusion and possessing a high degree of isolation. Low levels of outgroup contact, as reported, were sufficient to elicit a response of 'too crowded' but not sufficient to either reduce the level of the assessment assigned to the area or to adversely affect the importance or contribution to visit satisfaction made by any of the experience outcome domains.

At the other extreme, among the general use areas, the most developed, smallest, and most intensively used park (Mount Field) was accorded the highest average assessment by

participants. It also returned the highest 'ease of access' rating; the closest match of facilities provided to the subjective 'right number'; had the highest rating of overall condition; and the highest proportion of respondents calling for 'no modifications'. Mount Field was the most successful of the general use areas in providing settings with an appropriate balance of access, facilities, development, and perceived naturalness which approximated the anticipated and demanded settings of its participants.

While some degree of self-selection would be anticipated in terms of those who choose to visit Mount Field on the basis of the success of previous visits, the high proportion of first time visitors (64%) and their assessment of the park would tend to indicate that this park presents the best approximation of what would-be visitors anticipate and demand in terms of the settings provided.

The significant correlations between the contributions of the various experience outcome domains to overall visit satisfaction and participant views and impressions were few and weak but generally consistent with the relationships suggested by the model. Perceived difficulties of access were correlated with higher reported contributions of those experiences that would be expected to be associated with dealing with such difficulties: the enjoyment of physical exercise, feelings of escape and enjoying a sense of

freedom. These relationships were carried over in respect of participants' views on future access where those who preferred lower standards of access tended to value more highly the experiences associated with feelings of achievement, risk, exercise and escape. Conversely, those participants who were more socially directed - either towards sharing experiences with an in-group or meeting or observing others tended to show a preference for higher standards of access which would facilitate their activities and a less primitive environment. In general, the more primitive the perceived or preferred environment the greater the tendency for participants to report greater contributions of experiences associated with risk, exercise, escape, freedom, and achievement to visit satisfaction.

At the then prevailing frequency of out-group encounters, tolerance of crowding showed an anticipated correlation with importance of meeting or observing others. Those for whom out-group contacts contributed positively to visit satisfaction tended to view any particular level of frequency of encounters as being less "crowded" than other participants. What was not anticipated was the correlation between greater contributions of the experiences associated with introspection and freedom to visit satisfaction and a similar tolerance of crowding. This would suggest that while a number of participants held the view that they experienced too many out group encounters, the general frequency of encounters is well below that which might reduce

opportunities to experience those outcomes we might associate with isolation from others and actually contributed positively to these two particular ones.

VI.2. Impressions and Views by Activity Setting

As the activity settings formed the basis upon which participants were grouped for the purpose of comparing outcome profiles, comparisons were also undertaken to examine the possible relationships between the outcome scores of those participating in particular activity settings and their views on certain management options.

Given the variations in access, perceived condition and appearance, and level of development, comparisons of visitor impressions of current conditions within given activity settings without reference to the park in which the participation took place are of limited use, however a sample size such as was achieved in the first stage of the study precludes a detailed comparison of participant views on each activity setting from each park. Nevertheless, comparisons of participant views concerning the level of facilities provided for users and perceptions of general conditions were undertaken in order to determine if there was any widespread consensus regarding these aspects of the activity settings held by those participating and whether or

not any correlation between views or opinions and scoring of the experience outcome domains was uniform across all activity settings.

Apart from views on exisiting conditions, comparisons were undertaken of the views of participants, in each activity setting, on such future issues and management approaches as are relatively independent of the minor physical variations that currently exist among the general use parks. These issues consist of participant views on future access, development, and visitor management.

VI.2.1. Facilities and General Condition:

In respect of the level of comforts and conveniences provided for participants, rafters were the participant group who were most satisfied with the available facilities, that is, virtually none. Just over 94% of rafters felt that the situation was as it should be with 4.8% believing that additional facilities would be appropriate or necessary (Table 6.7).

Daywalkers, bushwalkers, sightseers and picnickers all had considerable majorities of participants who held the view that the level of provided facilities was appropriate although bushwalkers were the only group to have a greater proportion of respondents reporting an excess of facilities as opposed to more facilities being warranted.

TABLE 6.7

PARTICIPANT IMPRESSIONS OF PARK CONDITIONS: FACILITIES AND GENERAL CONDITION

COMFORTS AND CONVENIENCES (N=546)

	Too Many	Right No.	Too Few	Essentials Missing	Wt Avg.[1]
	+1	0	-1	-1	
Rafters	1.1%	94.1	2.1	2.7	-3.7
Daywalkers	4.3	87.9	5.0	2.9	-3.6
Bushwalkers	8.6	84.5	1.7	5.2	1.7
Developed Area Campers	6.8	58.9	13.7	20.5	-27.4
Sightseers	6.3	79.2	8.3	6.3	-8.3
Picnickers	5.1	82.1	12.8	0.0	-7.7

GENERAL IMPRESSION OF CONDITION (N=567)

	Very Good	Fair	Poor	Very Poor	Wt Avg.
	+2	+1	-1	-2	
Rafters	77.9%	19.7	1.9	0.5	1.73
Daywalkers	72.1	24.3	3.6	0.0	1.65
Bushwalkers	49.2	50.8	0.0	0.0	1.49
Developed Area Campers	55.6	36.1	4.2	4.2	1.35
Sightseers	54.2	39.6	4.2	2.1	1.39
Picnickers	67.5	32.5	0.0	0.0	1.68

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[1] 'too few' and 'essentials missing' both valued at -1 for this average

Those involved in developed camping were the most poorly provided for as 34.2% of participants in this category felt that the level of facilities provided was inadequate and, of those participating in developed camping, just over 20% believed that essential facilities were missing. This is more than three times greater than for any other participant group and would indicate that developed campers in this region are not able to find camping areas with the facilities they have come to expect. Nevertheless, there was still more than 6% of developed campers who believed fewer facilities would have been completely acceptable.

Developed campers also had the poorest opinion of the conditions they found in the area's parks with 8.4% rating them as poor to very poor. Sightseers had almost as poor an opinion with 6.3% rating the areas negatively. Rafters had the highest proportion of participants rating the area most highly and all groups with the exception of bushwalkers had the majority of their participants in the 'very good' category. The exception, bushwalkers, were almost evenly split between fair and very good.

While at the level of the entire sample there were no significant correlations revealed between participants' scoring of the experience outcome domains and their attitudes towards the level of comforts and conveniences, when the participants were considered within individual

activity settings, significant correlations did appear although they varied greatly and there was little uniformity among the user groups.

Among rafters, there were no significant correlations between the attitudes of respondents towards the relative level of comforts and conveniences that ought to be provided and the contribution of any of the experience outcomes to overall visit satisfaction. Among bushwalkers there were three significant correlations. Bushwalkers for whom experiences associated with equipment usage, meeting or observing people, and freedom contributed to overall visit satisfaction also tended to be of the view that greater levels of facilities would be appropriate (correlations of .23, .29, and .34 respectively). Surprisingly, the user group with the greatest similarity to bushwalkers in terms of the linkage between attitudes towards facilities and valued outcomes was sightseers for whom equipment and meeting or observing people were also correlated with facilitiy development (.31 and .26 respectively). Sightseers differed from bushwalkers in that the contribution of feelings of autonomy to visit satisfaction was also correlated (.26) to support for additional facility development.

There was only a single significant correlation among picnickers (autonomy: .32) and developed area campers (family togetherness: .35) between their scoring of the

outcome domains and facility development.

Daywalkers differed from all other user groups in that there were no positive correlations but a number of negative ones. Support for additional facilities among daywalkers was negatively correlated with achievement (-.25), risk taking (-.19), nature/discovery (-.27), and exercise physical fitness (-.24).

VI.2.2. Future Access:

In response to the query on appropriate future internal access, sightseers most strongly favored the development of high standard sealed roads while daywalkers, campers and picnickers gave their greatest support to the development of additional gravel roading although the latter were almost evenly split between support for sealed and gravelled roads. Both bushwalkers and rafters gave little support to additional sealed roads and strongly supported the proposition that there should be no additional roading whatsoever. While rafters overwhelmingly rejected additional roading (83.%) there was a greater diversity of views among bushwalkers with over 25% supporting the development of additional gravel roads within the park areas (Table 6.8).

The possibility of developing roads to a standard suitable for four wheel drive vehicles attracted little support from any of the participant groups.

TABLE 6.8

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: ACCESS

FUTURE INTERNAL ROADS SHOULD BE (N=532)

	Two Lane Sealed	Gravel Surfaced	FWD Passable	No More Roads
Rafters	5.1%	8.5	2.8	83.5
Daywalkers	31.9	47.1	1.4	19.6
Bushwalkers	6.9	25.9	6.9	60.3
Developed Area Campers	20.5	56.2	8.2	15.1
Sightseers	52.1	37.5	0.0	10.4
Picnickers	43.6	46.2	2.6	7.7

ALLOWABLE FORMS OF TRAVEL (N=549)

	Any & All Vehicles	FWD Only	Non-Motorised	Foot Only
Rafters	1.0%	3.6	39.4	56.0
Daywalkers	43.9	0.0	14.4	41.7
Bushwalkers	6.8	3.4	5.1	84.7
Developed Area Campers	44.6	4.2	18.1	33.3
Sightseers	72.3	0.0	6.4	21.3
Picnickers	66.7	2.6	10.3	20.5

WALKING TRACKS SHOULD BE (N=554)

	Signed, Gravelled or Sealed	Signed & Duckboarded	Signed Only	Cairns Only	Unmarked
Rafters	0.5%	11.1	12.1	42.9	33.3
Daywalkers	5.0	62.6	25.9	5.8	0.7
Bushwalkers	3.4	60.3	22.4	10.3	3.4
Developed Area Campers	1.4	69.9	21.9	5.5	1.4
Sightseers	10.6	59.6	25.5	4.3	0.0
Picnickers	7.7	56.4	28.2	7.7	0.0

With regard to the actual means of travel used within the parks areas, rafters and bushwalkers gave greatest support to non-mechanised or foot travel (95.4% and 89.8% respectively). Bushwalkers gave their greatest support to travel on foot only (84.7%) and the lowest support of any group for other non-motorised travel. This very low support for general non-mechanised transport could possibly indicate a resistance to the expansion of the use of horses in traditional bushwalking areas.

Daywalkers and campers were split across the transport options supporting unrestricted vehicle use, foot travel only, and non-mechanised travel in that order, while sightseers and picnickers strongly supported the use of all types of motorised transport within park areas.

The views of the participant groups on track standards followed a pattern similar to that established by the previous two access-related issues. Rafters supported the minimum of possible track development and signage with 33.3% opting for no track marking whatsoever. The majority of bushwalkers supported a greater degree of development of walking tracks including signage and duckboarding with some support for minimal or no track marking. With the exception of rafters, all groups gave their greatest support for signing and duckboarding with just over 10% of sightseers opting for maximum track development to the level of gravel

or sealed tracks (Table 6.8).

As was the case with views on the relative adequacy of comforts and conveniences provided, there were a number of correlations between the scoring of the experience outcome domains and participants' views on what constitutes appropriate access.

There were no significant correlations between views on access and the scoring on any outcome domain among rafters. Among bushwalkers, support for higher standards of access was positively correlated with the scoring of the domains of equipment (.23) and social contact (.25); advocacy of fewer or no restrictions on means of access showed correlation with social contact (.25) and, somewhat surprisingly, exercise/physical fitness (.25).

Picnickers revealed many more significant correlations. Support for higher standards of access was negatively correlated with exercise/physical fitness (-.28) and escape from social/physical pressures (-.33) and positively correlated with family togetherness (.37) while advocacy of fewer or no restrictions on the means of access was negatively correlated with autonomy (-.45), equipment (-.29), social contact (-.31), nature/discovery (-.28), stimulation/renewal (-.40), exercise/physical fitness (-.35), and escape from social/physical pressures (-.42).

Among sightseers, family togetherness was positively correlated with both support for higher standards of access (.24) and advocacy of fewer or no restrictions on the means of access (.34) with the single negative correlation being between fewer restrictions on means, and achievement (-.22). This pattern was repeated for developed area campers with the respective figures being .24, .38 and -.23. In addition, advocacy for fewer or no restrictions on means of access among campers was also positively correlated with autonomy (.20) and meeting/observing people (.21).

Daywalkers were the only user group which showed a correlation between nature/discovery and support for improved standards of access (-.22). Improved standards of access was also correlated with achievement (-.26) and meeting/observing people (.30). The only outcome domain which showed a correlation with advocacy for fewer or no restrictions on means of access, among daywalkers, was freedom (.23).

VI.2.3. Development:

In terms of the qualitative assessment of the level of user facilities appropriate for the various activity settings, rafters again gave greatest support to the minimum possible level of facility provision with 61% opting for absolutely no facilities whatsoever and a further 36% supporting the provision of only those facilities necessary for visitor

safety. Bushwalkers gave majority support (67.8%) to the provision of facilities to the level required for visitor safety. Daywalkers and sightseers produced a three-way split with support divided among the categories of some facilities, minimum facilities, and safety facilities only while picnickers and developed area campers gave majority support to the category of some facilities (Table 6.9).

With the exception of rafters, all participant groups gave majority support to the concept of strictly limited modifications to park areas to allow for increased use. Those participant groups whose activity settings were the most developed showed the greatest support for further development while those in less developed settings, the bushwalkers and the rafters, were biased towards less development with rafters giving majority support to there being no modifications at all to cater for increased user numbers.

VI.2.4. Visitor Management:

The greatest support for limiting the number of visitors as a means of preventing or minimising site degradation arising from overuse came from rafters who overwhelmingly (92.2%) opted for limiting numbers while rejecting possible restrictions on visit duration, the closure of sites, or the re-inforcement of sites. No other participant group was so consistent in supporting one single approach although

TABLE 6.9

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: DEVELOPMENT

COMFORTS AND CONVENIENCES REQUIRED FOR SUCH AREAS (N=571)

	Many	Some	Minimal	Safety	None
Rafters	0.0%	0.5	1.9	36.6	61.0
Daywalkers	2.2	30.2	26.6	37.4	3.6
Bushwalkers	0.0	13.6	10.2	67.8	8.5
Developed Area Campers	4.1	54.8	24.7	15.1	1.4
Sightseers	4.2	35.4	29.2	29.2	2.1
Picnickers	2.6	64.1	23.1	10.3	0.0

MODIFICATIONS TO ALLOW FOR INCREASED USE (N=510)

	Very Extensive	Moderately Extensive	Strictly Limited	No Modifications
Rafters	0.0%	1.4	39.3	59.2
Daywalkers	2.1	10.0	53.6	34.3
Bushwalkers	0.0	1.7	66.1	32.2
Developed Area Campers	1.4	13.7	63.0	21.9
Sightseers	2.1	19.1	55.3	23.4
Picnickers	0.0	12.5	65.0	22.5

picnickers came closest with 64.9% favoring area closure (Table 6.10).

Support for area closure was greatest among day visitors with daywalkers, picnickers and sightseers all giving absolute majority support to this approach. Developed area campers also gave strong support (43.7%) for area closure but supported restrictions on visitor numbers to a high degree as well. Bushwalkers, whose activities took them away from the developed areas of the parks came closest to a three way split, giving their greatest support (40.4%) to restrictions on visitor numbers followed by area closure (28.1%) and site re-inforcement (26.3%).

Support for a strong management presence in the form of regulations and enforcement was greatest among those participants using the more developed areas of the parks. Sightseers and daywalkers gave their strongest support for strict and strongly enforced regulations while developed area campers and picnickers favored a more moderate approach. Bushwalkers gave their greatest support for moderate controls but also showed significant percentages in all three other categories (Table 6.10). Rafters, once again, showed a radically different response pattern with half of their number opting for total reliance on the common sense of participants and diminishing support for those options involving increasing management presence.

TABLE 6.10

PARTICIPANT VIEWS ON PREFERRED FUTURE CONDITIONS: CONTROL

BEST WAY TO PREVENT DAMAGE FROM OVERUSE (N=553)

	Limit Numbers	Limit Time	Close Areas	Re-inforce Sites
Rafters	92.6%	2.5	3.0	2.0
Daywalkers	14.5	5.1	59.4	21.0
Bushwalkers	40.4	5.3	28.1	26.3
Developed Area Campers	31.0	9.9	43.7	15.5
Sightseers	16.7	4.2	52.1	27.1
Picnickers	21.6	2.7	64.9	10.8

RULES AND REGULATIONS SHOULD BE (N=571)

	Strict & Enforced	Moderate	Minimal	Rely on Common Sense
Rafters	15.0%	13.6	21.5	50.0
Daywalkers	50.0	30.0	12.9	7.1
Bushwalkers	24.1	32.8	22.4	20.7
Developed Area Campers	40.3	48.6	6.9	4.2
Sightseers	63.8	14.9	8.5	12.8
Picnickers	45.0	52.5	2.5	0.0

There were no significant correlations in respect of participants' views on ways and means of preventing damage arising from overuse and few correlations between views on the appropriate nature of rules and regulations and the scoring of the experience outcomes by the user groups.

Among daywalkers, support for a more regimented, regulated approach was correlated only with social contact (.19). Developed area campers showed a similar correlation (.25) but also revealed two others: a positive correlation with the outcme domain labelled nature/discovery (.22) and a negative correlation with risk taking (-.29). Rafters' support for regulation and enforcement was correlated with only with introspection (-.11) and freedom (-.11) while picnickers' support was correlated with achievement (-.36) and risk taking (-.31).

VI.2.5. Discussion:

Rafters clearly hold distinctly different views on the majority of management issues as compared with other participant groups. However, in terms of their perceptions of the suitability of then extant conditions, the differences among the participant groups were such that the transition from most satisfied to least satisfied was generally a gradual one with rafters showing greatest satisfaction with the level of facilities provided and with the overall conditions while developed area campers were

least satisfied and the other participant groups arrayed between these extremes. This was not the case when the issues related to future management.

The examination of participant views on future management issues on the basis of activity setting revealed that rafters were the most extreme in their resistance to all forms of development and that a considerable gap existed between the position held by rafters and the next most extreme group, bushwalkers, with the remaining participant groups occupying the other extreme.

On some issues there were very clearly three groupings. The appropriate level of facilities to be provided for users was one such issue. Rafters gave their greatest support for no additional facilities whatsoever while bushwalkers gave majority support to facilities required for safety reasons and the remaining participant groups gave greatest support to some level over and above the minimal. Additional roading was another issue that, if viewed as a roads/no roads issue, showed three distinct groupings. Rafters very strongly rejected additional roading while bushwalkers gave at least some support to the provision of gravel roading and other participant groups to a mix of gravel and paved options.

With other issues, such as track development, modifications to allow for increased use, and the control of use-related site degradation bushwalkers were far closer to the response

of the developed area users than to rafters but in each case, rafters showed a clearly different response pattern than the other participant groupings.

In general the positions adopted were generally consistent with the settings, circumstances and valued experience outcomes of the various participant groups.

Rafters on the Franklin - Lower Gordon spent up to a fortnight in an entirely primitive area for which the experience outcomes associated with contact with nature are of paramount importance. Of secondary importance are outcomes associated with achievement, stimulation, and risk taking. The river corridor is narrow, constrained, and there are relatively few options in terms of portages, stopping points and campsites. In turn, as a group, rafters show marked opposition to any action which might impinge upon or reduce either the primitive character of the park or the degree of difficulty and risk associated with rafting it. Rafters opposed any increase in management intrusion or development. They opposed road or track development, anything other than transport by non-mechanical means, and any improvement to access or facilities. Moreover, they are strongly of the view that management controls should be imposed from beyond the boundaries of the park, limiting numbers as opposed to applying restrictions on behavior.

Bushwalkers are medium duration participants for whom the

experience outcomes associated with nature contact are also important but for whom a number of other experience outcomes, primarily exercise, but also escape, stimulation, and achievement are almost as significant. In addition, bushwalkers rated the experience outcomes relating to feelings of autonomy more highly than any other participant group. The importance of exercise is reflected in bushwalkers opposition to anything other than foot travel while the contribution of experiences linked to autonomy to visit satisfaction may contribute to the view that the level of facilities provided is excessive, possibly detracting in some fashion from 'self-sufficiency'.

Being totally dependent on their capacity to pack in all their equipment once on the track the view that some additional roading within the park areas to improve access to trail heads is reasonable in context. Moreover, their lower valuation of risk related experiences and lower relative rating of the contribution of nature contact may well be reflected in bushwalkers view that some facility development, particularly that related to track quality and visitor safety is warranted. Finally, the existance of far greater options in terms of routes, duration, and peripheral activites may contribute to the greater variation in preferred management approaches as compared with rafters.

Like bushwalkers, developed area campers are medium duration participants. Unlike bushwalkers however, they are vehicle

based and placed a very high rating on the contribution of experiences associated with family participation to overall satisfaction. Vehicle-based family visits of medium duration would be expected to place higher demands on service facilities and it was among this group that the greatest dis-satisfaction with the level of facilities provided was greatest. Being vehicle linked, it follows that this group would support additional roading.

A high proportion of respondents calling for greatly increased facilities occured among developed area campers which also showed a significant correlation between the call for increased facilities and the importance of family-related experience outcomes. Finally, the use by developed area campers of the more intensively managed areas, the importance of social experiences, and the lower relative contribution of nature contact are all compatible with support for higher profile management presence and support, and a more rigidly controlled management regime.

Daywalkers are short duration participants for whom nature contact, exercise and escape are the principal experience outcome domains which contribute to visit satisfaction. While operating from the visitor service areas, they are relatively minor consumers of facilities and there were negative correlations between the support for additional facilities and two of their principal experience outcomes - nature and exercise. Among the short duration visitors,

daywalkers provided the least support for increased development and the greatest support for limitations on means of travel - their advocacy of travel by foot reflecting the importance of exercise related experiences to this group.

The remaining groups, picnickers and sightseers, are short duration users for whom the experience outcomes associated with nature contact, while still the most significant, are closely followed by those associated with social and family interaction. They tend to be strongly vehicle linked and closely associated with service areas. They are least resistant to additional development and show the greatest support for increased facilities, higher standard roads, improved access, and unrestricted use of vehicles.

The correlations which were revealed between the value and importance of the experience outcomes reported by participants in the various activity settings and their views on management prescriptions were few and weak but those correlations that were significant were again consistent with what the model would suggest i.e. that those participants who valued those experiences clearly associated with 'primitive' environments tended to reject management actions that would reduce or alter the nature of the setting.

The user groups showed little consistency or commonality of

perception with the existance of significant correlations between specific experience outcomes and management options varying from setting to setting. The two most common correlations tended to be between the reported importance of social experiences and support for increased infrastructure development and reported importance of accomplishment and achievement experiences and opposition to such development.

CHAPTER SEVEN

RAFTERS' RESPONSE TO VISITOR NUMBERS AND MANAGEMENT PRESCRIPTIONS

The narrow river corridor of the Franklin - Lower Gordon and the rapid growth in the popularity of white water rafting have highlighted a number of problems. The restricted nature of the river corridor limits the area suitable for campsites and in certain sections the available sites are subjected to concentrated use. Firewood is scarce in some locations and standing trees have been damaged. In other areas campfires pose a potential fire threat due to the peaty nature of the area's soils. Comments provided by rafters participating in the first stage of this study also indicate a concern on the part of users over the number of rafters on the Franklin River, crowding and over-use of certain campsites, the condition of portage tracks, the amount of litter encountered, and the careless disposal of human excrement adjacent to the river.

In the second stage of the study, the rafting survey form included a section consisting of thirty-nine management options and suggestions relating to these and other concerns. These management options were presented in statement form with the response format consisting of a seven point Likert-type scale with the polar extremes of 'strongly agree' and 'strongly disagree'. The statements covered three general topics: possible rationing of visitor

numbers, the control of campsite use, and safety and information.

The purpose of this chapter is to examine the response of rafters, both in general and in specific subgroups, to these selected management options and to examine the relationship between rafters' responses to management options and their scoring of the various previously defined outcome domains.

VII.1. Rationing and User Numbers:

All respondents were asked to roughly estimate the number of parties they had encountered while on the river (none, 1-5, 6-10, 11-15, more than 15 parties). Eighty percent of those surveyed encountered fewer that 11 other parties. Within this group, 30% felt that the number of rafters encountered was too high. Just under twelve percent of the sample encountered between 11 and 15 other parties and half of those in this category believed there to have been too many people on the river. A small proportion of rafters (8%) encountered more than 15 other parties and, amongst this group, 82% felt the number of encounters with other rafters excessive. Overall, 40% of those sampled felt they encountered too many other rafters on the river (Table 7.1).

Those in private parties reported more encounters than those in commercially guided tours. Sixteen percent of the private

TABLE 7.1

PARTIES ENCOUNTERED BY PARTY TYPE AND PROPORTION BELIEVING ENCOUNTERS TOO NUMEROUS

	Total Sample (N=416)		Private Parties (N=244)		Commercial Parties (N=153)	
Number of Encounters	%	% Objecting*	%	% Objecting*	%	% Objecting *
None	1.2	-	0.4	-	2.7	-
1- 5	41.5	27.8	32.5	32.9	56.7	21.2
6-10	37.4	41.2	37.9	41.3	33.3	42.9
11-15	11.6	50.0	16.0	53.8	6.0	**
More than 15	8.3	82.3	13.2	81.2	1.3	**

* Proportion of those rafters who reported a given level of encounters and who believed the number of people encountered excessive.

** Fewer than ten individuals in this cell.

rafters reported between 11 and 15 encounters, while 13% reported encounters with more than 15 other parties. The comparable figures for those in commercial parties were 6% and 1%. Private rafters also demonstrated a lower tolerance to meeting other rafters than did those in commercial parties. While approximately 40% of both the private and commercial rafters who reported between six and ten encounters thought they met too many people, at the level of between one and five encounters, 33% of private rafters felt there were too many encounters while the comparable figure for those in commercial groups was a lower 21%. No comparison was made of attitudes where more than 10 encounters were reported as only a small minority of commercial rafters (7%) had more than ten encounters.

The perception on the part of participants that steps should be taken to control the number of rafters on the river at any one time is reflected in the majority support given for the imposition of restrictions on party size (75.7%), on the number of departures to be permitted on any one day (71.4%), and for the mandatory spacing of departures (68.3%). There was also recognition of the cumulative nature of the impact of excessive user numbers in the support given to the imposition of restrictions on the total number of rafters to be allowed onto the river in any given year (57.2%). The only option that was rejected by the majority of rafters was the possible restriction placed on raft size (Table 7.2).

TABLE 7.2

ATTITUDES TO RATIONING BY PARTY TYPE AND RESPONSE TO NUMBERS

Management Policy (Control of Numbers)	All Rafters (N=416)			Private Rafters (N=244)			Commercial Rafters (N=153)			Encounters Too Frequent (N=167)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Limit party size	75.7	14.4	1.42	74.2	14.7	1.41	81.0	11.2	1.57	83.9	11.3	1.66
Limit departures per day	71.4	16.8	1.22	70.5	17.6	1.20	74.4	15.0	1.33	76.7	14.3	1.43
Limit departures per year	57.2	23.3	0.79	54.5	25.8	0.70	63.4	18.3	1.05	64.7	19.7	1.12
Limit raft size	24.5	42.8	-0.38	22.5	45.1	-0.42	28.8	37.2	-0.19	24.0	50.3	-0.46
Space out departures	68.3	21.8	1.12	66.0	19.7	1.06	75.2	11.1	1.39	75.5	15.5	1.37
Enforce a permit system	48.6	32.6	0.27	48.0	34.4	0.13	51.6	26.8	0.61	52.8	28.0	0.47
Advance reservations by mail	67.5	21.0	0.92	67.2	21.7	0.97	66.0	20.3	0.81	71.9	19.7	0.99
Annual lottery	20.7	66.6	-1.22	20.9	65.6	-1.11	22.9	64.0	-1.23	25.2	65.2	-1.18
First come - first served (daily)	42.5	47.8	-0.23	45.9	44.7	-0.08	37.3	51.6	-0.44	42.0	51.4	-0.26
Priority to first time visitors	37.0	46.7	-0.25	38.9	44.3	-0.17	32.7	49.7	-0.40	47.4	40.0	0.01
Priority to local residents	12.5	68.5	-1.47	11.9	68.8	-1.53	13.7	65.4	-1.28	13.2	71.8	-1.55
Priority to commercial tours	20.0	69.2	-1.31	6.6	86.0	-2.07	42.5	41.2	-0.02	16.2	74.8	-1.58
Priority to private individuals	23.3	55.8	-0.80	29.1	50.4	-0.56	14.4	64.7	-1.17	31.2	52.0	-0.57
Priority to rafting clubs/societies	32.5	49.2	-0.57	29.5	52.1	-0.70	39.2	43.2	-0.31	35.4	48.4	-0.51

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

While it is often the case that larger parties use rafts occupied by six to eight people as opposed to the single occupant raft used by the majority of participants, it is clear that most rafters did not see the limiting of raft size as being an appropriate means of controlling numbers.

Support for the imposition of controls on user numbers was generally greatest amongst those who felt that the number of parties encountered was too high although this group showed the greatest opposition, in terms of the weighted average, against the imposition of restrictions on raft size. Perhaps less predictable was that those in commercial parties, without exception, gave greater support to the control of user numbers than did those in private parties. This is in spite of private party rafters demonstrating less tolerance to out-group encounters and may be indicative of private party rafters trading off a certain degree of crowding to retain greater freedom of access.

The possible use of rafting permits as a means of implementing control over numbers had moderate support overall with those in commercial parties and those who felt there were too many parties on the river providing strongest support. Those in private parties showed greater support than opposition to a permit system but the margin was quite narrow showing a weighted average of only .13.

If some form of permit system were adopted, the issuing of

permits by advanced reservation by mail was the most favored means of allocation (67.5% supported; 21% opposed) and the only option to be rated positively. Advanced reservations attracted majority support overall and by all party types. The issuing of permits on a daily first come - first served basis had more opponents than supporters with the greatest resistance coming from those in commercial parties. This resistance was expected although it was weaker than anticipated as these parties run on relatively tight schedules including airline bookings, and any delays in getting onto the river would provide less of a margin for sitting out unfavorable and possibly hazardous water conditions. It is possible, however, that many first time participants making the trip as part of a commercial party might not be entirely aware of the tightness of the schedule planned by the tour operators nor aware of the changes in water level that can result from even short periods of rainfall.

The use of a lottery system to allocate permits was the most strongly opposed option being rejected by an absolute majority of rafters in all categories.

An examination of the responses to these same options on the basis of whether the respondents were Tasmanian or from out of state revealed that while both groups overwhelmingly supported limits on party size, Tasmanians were less inclined to support ceilings to be applied to departures

either on a daily or annual basis than were non-Tasmanian participants and were more in favor of restrictions on raft size (Table 7.3).

Tasmanians rejected the idea of rafting permits, but if a permit system were to be imposed, favored advanced reservations by mail. Also rejected was the granting of priority to any particular group. Non-Tasmanians gave majority support to the imposition of a permit system and favored one based on advanced reservations applied for and issued through the mails.

In all instances, experienced rafters were less in favor of restrictions of any kind being imposed on users and more strongly opposed to the imposition of any kind of permit system than were novices.

By far the most acceptable restriction that might be applied to restrict numbers would appear to be a ceiling on the size of parties to be allowed onto the river. Restrictions on party size were supported both by the rafting sample in general and by each of the subsamples examined. This overwhelming support for the imposition of limitations on party size (75.5% in agreement, 14.4% opposed) may have its source in the perception by many users that many of the parties on the river are already too large.

In order to assess rafters' opinions on appropriate party

TABLE 7.3

ATTITUDES TO RATIONING BY EXPERIENCE LEVEL AND ORIGIN

Management Policy (Control of Numbers)	Tasmanians (N=45)			Non-Tasmanians (N=371)			Novice Rafters (N=336)			Experienced Rafters (N=80)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Limit party size	75.5	11.2	1.57	75.7	14.9	1.42	78.0	13.1	1.50	66.4	19.8	1.10
Limit departures per day	60.0	20.0	0.96	72.7	16.5	1.24	73.8	16.1	1.28	61.3	19.9	0.96
Limit departures per year	46.7	28.9	0.49	58.5	22.6	0.83	58.7	22.3	0.85	51.3	27.4	0.56
Limit raft size	35.5	28.9	0.35	23.2	44.5	-0.46	25.0	40.5	-0.32	22.6	52.4	-0.62
Space out departures	53.3	26.7	0.67	70.1	16.2	1.18	69.7	16.3	1.28	62.6	21.1	0.90
Enforce a permit system	35.5	42.0	-0.07	50.1	31.6	0.31	48.2	31.0	0.28	50.1	39.9	0.20
Advance reservations by mail	55.5	28.9	0.40	69.0	19.1	0.98	68.1	20.3	0.93	65.1	23.6	0.87
Annual lottery	11.0	75.6	-1.73	21.8	65.5	-1.28	23.5	64.0	-1.20	8.8	77.0	-1.84
First come - first served (daily)	35.6	44.4	-0.35	43.4	48.2	-0.22	44.4	45.5	-0.14	35.1	57.4	-0.65
Priority to first time visitors	28.9	53.3	-0.42	38.1	45.7	-0.23	36.9	46.7	-0.22	38.1	45.6	-0.42
Priority to local residents	20.2	57.8	-1.02	11.7	69.7	-1.53	12.8	67.9	-1.48	11.3	71.2	-1.59
Priority to commercial tours	22.2	66.7	-1.02	19.7	69.5	-1.35	19.1	69.6	-1.32	23.9	67.3	-1.27
Priority to private individuals	17.8	60.0	-1.04	24.1	55.1	-0.76	24.1	55.1	-0.74	20.1	58.6	-1.01
Priority to rafting clubs/societies	31.2	44.4	-0.51	32.6	49.9	-0.58	32.8	48.2	-0.53	31.3	53.7	-0.72

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

sizes, respondents were asked to suggest maximum, minimum, and ideal sizes for Franklin - Lower Gordon rafting parties (Table 7.4). The ideal party size suggested by rafters in private parties was on par with the actual mean for such parties while the mean party size of the commercial groups was some 50% larger than that which the members of those same parties considered ideal, and more than twice as large as the ideal party size suggested by private party rafters.

From a management perspective this poses something of a dilemma. It is clear that participants strongly favor parties of a smaller size than commercial parties currently run although they are nevertheless within the general limits of acceptability. A response to user preference that imposed a reduction in party sizes permitted under the terms of licences issued to commercial operators would dramatically increase the costs to these operators' clientele as the normal configuration for such groups is two guides and six to eight clients. The commercial viability of established operations might well be jeopardized by this type of licence variation.

VII.2. Control of Campsite Use:

One of the major concerns of management is fire; not only the danger posed by wildfire resulting from carelessness, but also the less dramatic problem of the stripping of standing timber for firewood.

TABLE 7.4

ACTUAL AND USER SUGGESTED PARTY SIZES

Party Size	Private Parties (N=244)		Commercial Parties (N=153)	
	Mean	Std. Dev.	Mean	Std. Dev.
Actual	4.72	1.94	9.09	2.00
Suggested Maximum	6.35	1.51	9.03	2.09
Suggested Minimum	3.14	0.94	3.69	1.20
Ideal	4.45	1.06	6.08	2.03

Regardless of party type or views on user numbers, there was a clear recognition on the part of participants that there is a need for steps to be taken to reduce the likelihood of the park being damaged by rafters either setting fires or using inappropriate sources of firewood. One possible step to reduce such risk is the banning of axes and saws within the confines of the park. The great majority of rafters see the carrying of axes and/or saws into the park as inappropriate. The banning of such equipment was supported by an overwhelming majority of participants with the views of private and commercial parties showing little variation. A closely related policy suggestion, that all rafting parties be required to carry fuel stoves was also strongly supported, but not to the same degree (Table 7.5).

The lesser support for the requirement that all parties carry fuel stoves may indicate that while there is a strong feeling against the use of standing timber for firewood, there is much less resistance to scavaging for driftwood and windfalls for such use. The much lower weighted averages also indicate that those who do oppose the requirement that stoves be carried are quite strongly opposed while those in favor are less extreme in their views.

Although there is general ageement that saws and axes should be banned and that all parties should be required to carry fuel stoves, the actual banning of campfires was very

TABLE 7.5

ATTITUDES TO CAMPSITE USE CONTROLS BY PARTY TYPE AND RESPONSE TO NUMBERS

Management Policy (Campsite Management)	All Rafters (N=416)			Private Rafters (N=244)			Commercial Rafters (N=153)			Encounters Too Frequent (N=167)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Ban axes and saws	71.9	21.1	1.51	73.4	19.6	1.59	69.3	21.5	1.36	71.3	20.9	1.48
Require that stoves be carried	67.3	17.1	1.16	73.4	11.8	1.43	58.2	22.8	0.79	71.3	13.7	1.28
No fires permitted	24.3	68.5	-1.03	22.9	68.5	-1.02	24.9	69.2	-1.12	26.4	68.2	-0.88
Fire integral part of experience	48.3	37.8	0.21	51.7	32.0	0.38	46.4	41.8	0.32	45.6	41.2	0.13
Rely on personal judgement for fires	71.2	17.5	1.34	77.9	13.5	1.41	63.5	21.5	0.90	65.4	22.0	0.92
Camping at designated sites only	45.0	48.3	-0.02	39.3	52.5	-0.23	56.2	38.6	0.47	41.4	53.8	0.25
Re-inforce campsites	48.6	42.3	0.04	52.4	38.6	0.18	43.7	45.8	-0.07	47.4	44.8	-0.10
Toilet pits necessary	37.7	49.8	-0.27	35.6	49.2	-0.30	40.6	49.6	-0.21	38.4	51.4	-0.38
Garbage dumps necessary	12.3	80.5	-1.88	13.1	79.5	-1.84	12.5	79.7	-1.83	10.8	83.8	-1.96
Pack it in / Pack it out	91.9	4.6	2.50	89.7	4.6	2.48	92.1	5.3	2.46	92.2	2.4	2.60

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

strongly opposed. Moreover, private party rafters, the group that demonstrated the greatest degree of support both for a ban on axes and saws and for the necessity of carrying stoves, showed a very strong resistance to the banning of open fires and demonstrated the highest degree of agreement with the proposition that campfires are an essential component of the experience of rafting the Franklin - Lower Gordon. They also exhibited the greatest belief in the proposition that management should rely on the good judgement of individual rafters in regard to the use of fire.

Those in commercial parties, while most strongly rejecting a total fire ban, showed less confidence in a policy based on a reliance on rafters' good judgement.

Another significant management concern is the continuing degradation of favored campsites resulting from fairly intensive use. While this is not a problem along the whole length of the river, in reaches where the river corridor is narrow, potential campsites along the river edge are few and use is concentrated. To protect these areas it was suggested that some users be diverted through the closure of some sites and the hardening of others to withstand more intensive use.

Overall, both the possible restriction of camping to designated sites and the re-inforcement of campsites to

withstand heavier use were received neutrally with approximately equal proportions of participants supporting and opposing each proposition (Table 7.5).

Participants in private rafting parties showed strong resistance to the possible restricting of use to designated sites with 52% opposing and 39% supporting. Those in commercial parties, on the other hand, gave majority support to restricting camping to designated sites (56% to 39%). With regard to the re-inforcement of sites to withstand heavier use, the attitudes of commercial and private party members were in closer agreement although, in this instance, it was the private party members who were more in favor of the idea. The majority of rafters who felt that encounters were too frequent rejected the restriction of campsite use but the minority who did favor such restriction felt sufficiently strongly about the issue to return a positive weighted average. When it came to site re-inforcement, the situation was reversed; slightly more in favor than in opposition but with a negative weighted average.

While the problem of the careless disposal of human waste occurs the length of the river, the installation of pit toilets was uniformly rejected by all party types. Even more strongly rejected was the suggestion that garbage tips be established within the park as a possible approach to reducing the amount of debris left behind at campsites with the "pack it in / pack it out " philosophy receiving almost

universal support.

An examination of these same issues on the basis of whether the respondent was Tasmanian or from out of state revealed that local residents are less in favor of the banning of axes and saws, less in favor of a fire ban, more convinced of the essential role of campfires in the rafting experience, and have more faith in the good judgement of rafters in respect of fire, than do participants from outside of Tasmania (Table 7.6). The same comparison, on the basis of level of experience shows that experienced rafters give greater support to the carrying of fuel stoves, are less opposed to the banning of fire, and do not regard campfires as highly as less experienced rafters. At the same time, they have greater faith in rafters' good judgement regarding the use of fire and are not as ready to ban axes and saws as are more novice participants (Table 7.6).

VII.3. Information and Safety:

The final group of statements of possible management policies were directed at promoting and increasing user safety and the related issues of providing would-be participants with adequate and appropriate information.

Three of the management options presented would entail additional physical development within the park. The first

TABLE 7.6

ATTITUDES TO CAMPSITE USE CONTROLS BY EXPERIENCE LEVEL AND ORIGIN

Management Policy (Campsite Management)	Tasmanians (N=45)			Non-Tasmanians (N=371)			Novice Rafters (N=336)			Experienced Rafters (N=80)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Ban axes and saws	62.3	24.4	1.25	73.0	20.0	1.54	73.4	19.8	1.64	65.1	23.8	1.32
Require that stoves be carried	64.5	11.1	1.13	67.6	17.8	1.16	65.4	18.5	1.08	75.0	11.2	1.47
No fires permitted	15.5	75.6	-1.34	25.3	67.7	-1.00	22.6	71.4	-1.14	31.4	56.1	-0.58
Fire integral part of experience	51.1	26.7	0.38	47.9	39.2	0.18	48.6	37.7	0.22	47.6	37.4	0.11
Rely on personal judgement for fires	80.0	8.9	1.58	70.2	18.5	1.09	70.5	17.3	1.12	73.9	18.6	1.25
Camping at designated sites only	35.5	57.8	-0.16	46.1	47.2	-0.01	47.9	45.6	0.11	32.6	59.9	-0.58
Re-inforce campsites	46.7	35.5	0.22	48.8	43.1	0.01	50.0	40.3	0.08	42.5	50.0	0.15
Toilet pits necessary	33.3	48.9	-0.22	38.2	49.9	-0.29	37.8	49.6	-0.28	37.6	49.9	-0.26
Garbage dumps necessary	15.5	73.4	-1.80	11.9	81.4	-1.89	12.3	80.6	-1.87	12.6	79.9	-1.94
Pack it in / Pack it out	86.9	6.7	2.40	91.7	4.3	2.51	90.9	4.3	2.49	92.5	5.0	2.54

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

of these called for the construction of a ranger station at the Collingwood Bridge. At the time the study was undertaken, there were no rangers stationed within the park. Subsequently, two stations have been established; one at the Collingwood Bridge, and the other on the Lower Gordon.

The second of the three physical development options called for the construction of additional emergency huts that could be used by rafting parties that encounter difficulties. A number of such shelters already exist within the park, established prior to its proclamation and used by survey and Hydro Electric Commission work crews in past years. Walkers' huts are relatively common in Tasmania's national parks and are heavily used by visitors to Cradle Mountain - Lake St Clair, Mount Field, and Frenchmans Cap.

The final physical development option would involve the upgrading and re-inforcement of the portage tracks within the park. The three major portage tracks, at the Cauldron, Thunder Rush, and the Pig Trough can be difficult, involving steep slopes with poor footing and considerable climbs. A gradual programme of track upgrading was about to begin when the study was undertaken, being regarded by management as essential for visitor safety.

Of these three management proposals, the most strongly supported was the installation of a ranger station at the Collingwood Bridge, attracting 66% support form rafters in

general and no less than 64% support form any party type (Table 7.7).

The re-inforcement of the portage tracks was not seen as being as necessary or approppriate with just under 50% of rafters supporting such a policy and 38% rejecting it. On the basis of party type, those in commercial parties were only slightly more in favor demonstrating a weighted average only marginally higher than private party rafters.

The least popular policy was that calling for the construction of additional emergency huts. This type of development was opposed by over 70% of rafters with the response being highly consistent across all party types as well as among those who viewed the river as being too crowded. From this level of rejection it might well be argued that a case exists for a review of the necessity of retaining those huts already in place, particularly as the huts are in very poor condition and in need repair or rebuilding should a decision to retain them be made.

A second rough grouping of policy options consisted of management actions of a policing nature calling for strong management presence and intervention. These policies would be imposed upon users in an attempt to reduce the risk level by ensuring that participants are properly equipped, have a minimum skill level, and do not launch during those periods when the river level is demonstrably hazardous.Also included

TABLE 7.7

ATTITUDES TOWARDS INFORMATION AND SAFETY MEASURES
BY PARTY TYPE AND RESPONSE TO NUMBERS

Management Policy (Information and Safety)	All Rafters (N=416)			Private Rafters (N=244)			Commercial Rafters (N=153)			Encounters Too Frequent (N=167)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Ranger station at C'wood Bridge	66.1	15.6	1.08	68.0	15.2	1.12	64.1	14.3	1.08	68.3	16.7	1.05
Construct emergency huts	20.2	71.1	-1.39	19.2	70.6	-1.34	22.9	69.9	-1.33	17.4	71.8	-1.48
Re-inforce portages	49.0	38.5	0.23	49.6	38.1	0.16	49.0	37.3	0.43	44.4	43.6	0.05
Require formal registration	83.7	7.4	1.95	84.0	5.8	1.97	85.7	7.8	2.04	86.3	4.7	2.00
Conduct safety inspections	51.4	31.5	0.37	47.6	33.5	0.26	58.2	25.5	0.65	51.6	32.8	0.33
Refuse permits to ill-prepared parties	68.0	18.3	1.24	63.1	20.1	1.04	77.2	13.0	1.67	67.7	20.9	1.12
Skilled paddlers or guided parties only	27.5	64.6	-1.03	18.0	73.8	-1.46	41.8	49.7	-0.23	21.0	73.0	-1.35
Close river when water level unsafe	58.9	26.4	0.78	55.7	30.0	0.72	65.3	17.7	1.01	56.3	32.9	0.64
Produce more detailed maps	83.7	9.1	1.89	80.7	11.5	1.77	90.2	3.9	2.21	76.7	11.9	1.62
Produce safety check lists	82.2	7.0	1.80	80.7	8.2	1.68	86.9	3.3	2.07	79.7	7.1	1.70
More information booklets	87.0	3.8	1.99	87.7	3.7	2.05	88.9	3.3	2.03	83.2	6.0	1.78
Promote wetsuit usage	82.2	7.7	1.78	79.6	8.5	1.75	88.9	3.3	2.00	82.7	10.1	1.66
Emphasize risk	85.1	3.8	1.89	84.9	2.4	1.57	88.9	2.6	1.74	80.3	4.7	1.71
Suggested food and equipment lists	82.5	8.4	1.72	81.2	9.0	1.66	86.3	6.5	1.91	81.4	9.0	1.51
Publish information on water levels	81.0	6.7	1.67	80.4	6.5	1.67	85.0	5.8	1.80	82.7	6.5	1.64

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

in this grouping was the minimal requirement that all parties formally register before launching.

The requirement that all parties register before setting out attracted overwhelming support from all party types in spite of the current compliance rate for voluntary registration being very low. Also strongly supported was the proposition that, somehow, ill-equipped or ill-prepared parties should be denied access to the river. Surprisingly, the support for safety inspections was considerably lower, begging the question of how such ill-equipped parties could be identified.

The closure of the river, for safety reasons, when water levels are too high received majority support both overall and from all party types with the greatest support comming from those in commercial parties. However, limiting access to skilled or guided parties, for similar reasons, was rejected by all party types, even by those who were part of such parties.

The final group of policy options consisted of those management actions that could be taken to ensure that rafters are made aware of the risks involved in floating the Franklin - Lower Gordon, know what food and equipment they should carry, and have available suitable maps and information on expected conditions. Little or no effort is put into these areas at present and all received exceptional

support.

A comparison of the responses of Tasmanians with the responses of those participants from out of state revealed that Tasmanians were more supportive of development options involving ranger stations and portage track upgrading, and more opposed to additional shelter huts than were participants from out of state. They were also more generally in favor of active management intervention in access control, having higher weighted averages for all policy statements, but less vigorous in their support for additional efforts in information dissemination. The exception to the latter was in the case of steps taken to emphasize risk (Table 7.8).

Experienced rafters generally opposed additional development within the park to a greater extent than did novices but both were similarly supportive of the installation of a ranger station at the head of the river. They also were less in favor of active management intervention to control access than were novice rafters with one exception; experienced rafters were less inclined to reject the proposition that access should be limited to experienced individuals or guided parties.

VII.4. Management Prescriptions and Experience Outcomes:

The final issue addressed in the study concerns the

TABLE 7.8

ATTITUDES TOWARDS INFORMATION AND SAFETY MEASURES
BY EXPERIENCE LEVEL AND ORIGIN

Management Policy (Information and Safety)	Tasmanians (N=45)			Non-Tasmanians (N=371)			Novice Rafters (N=336)			Experienced Rafters (N=80)		
	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*	% Agree	% Dis-Agree	Wt. Avg*
Ranger station at C'wood Bridge	73.3	15.6	1.38	65.2	15.7	1.04	65.8	15.7	1.06	67.6	14.9	1.18
Construct emergency huts	17.8	75.5	-1.60	20.4	70.7	-1.36	21.6	70.6	-1.46	16.3	73.7	-1.65
Re-inforce portages	51.1	33.3	0.38	48.7	39.2	0.21	49.7	37.8	0.27	26.3	61.2	0.06
Require formal registration	91.1	4.5	2.29	82.7	7.9	1.91	84.8	6.3	2.03	78.8	12.4	1.75
Conduct safety inspections	53.3	24.5	0.60	51.2	32.4	0.35	51.1	30.4	0.44	52.5	36.2	0.09
Refuse permits to ill-prepared parties	66.7	13.3	1.33	68.1	19.0	1.23	70.0	16.6	1.33	60.1	24.9	0.89
Skilled paddlers or guided parties only	42.3	68.8	-0.22	25.3	67.2	-1.14	25.6	66.0	-1.13	33.8	59.9	-0.66
Close river when water level unsafe	57.8	22.2	1.09	59.1	26.9	0.75	61.9	23.5	0.91	46.3	38.7	0.25
Produce more detailed maps	75.6	11.1	1.64	84.6	8.9	1.92	83.7	8.3	1.92	83.8	12.4	1.89
Produce safety check lists	77.8	8.9	1.69	82.1	6.8	1.80	83.9	5.4	1.86	75.1	13.6	1.49
More information booklets	82.2	6.7	1.82	87.6	3.5	2.01	86.0	3.6	2.01	91.3	4.9	1.94
Promote wetsuit usage	75.5	15.6	1.56	83.0	6.8	1.81	84.2	6.6	1.84	73.8	12.4	1.54
Emphasize risk	86.7	0.0	2.16	84.9	4.3	1.86	85.0	4.0	1.88	85.0	3.7	1.91
Suggested food and equipment lists	77.8	11.1	1.56	83.0	8.7	1.74	83.6	7.5	1.80	77.6	12.4	1.35
Publish information on water levels	77.8	8.9	1.47	81.3	6.6	1.69	82.1	6.9	1.70	76.3	6.2	1.55

* Weighted average calculated on the basis of the seven point response scale: Strongly Agree (3), Moderately Agree (2), Agree (1), No Opinion (0), Disagree (-1), Moderately Disagree (-2), Strongly Disagree (-3).

relationship between rafters' sought after satisfactions as reflected by their scores on the 13 experience outcome domains previously established and their views on future management policies at the most general level.

The model underlying this study suggests that the combination of physical, social and managerial environments, operating in concert, establish a recreation opportunity setting which facilitates the pursuit of predictable, sought-after experience outcomes. The successful pursuit of any given package of experiences is therefore dependent upon the availability of appropriate settings.

The recreationists' decision model hypothesises that an individual's decision to participate and, by inference, the selection of a particular activity and setting, is a rational process based on, among other factors, previous experience, knowledge and an expectation of the achievement of predictable outcomes. Thus, while it is the setting which determines the availability of the experience opportunity, it is the expectation of the achievement of particular experiences that contributes to the choice of activity and setting. By extension, the underlying demand for particular experience opportunities will be reflected in recreationists' expressed preferences for future management actions on the basis that those actions will be expected to establish environments conducive to the realization of the sought after outcomes.

Assuming that present participants would choose to maximise the potential contribution of valued experiences and favor those management directions which would enhance existing experience opportunities, a regression analysis was undertaken using currently achieved experience outcomes as determinants of preference for future management policy. As the purpose of the exercise was to determine preferrences for management directions at the broadest possible level, the individual policies represented by the individual management prescriptions were not used but were grouped into related spheres to create three indices representing policy options.

The three indices used to reflect management input were constructed from the general management prescriptions. The first index reflects the degree to which the respondent is in favor of additional physical development within the park and is the mean of the response over the following prescription items: that campsites should be re-inforced, portage tracks re-inforced, additional shelter huts constructed, pit toilets installed, and garbage dumps provided. The second index relates to the extent to which management should exercise control over participant behavior and is composed of the following: that axes and saws should be banned, that safety inspections should be compulsory, ill-equipped parties be denied access, limitations placed on party size, camping restricted to designated sites, and that

the river should be closed when water levels are too high. The final index is concerned with the level of information that is made available and the effort made to inform participants of the nature of the trip. It includes: producing more detailed maps, providing food and equipment checklists, promoting the use of wetsuits, emphasizing the level of risk involved, and providing information on anticipated water levels.

The regression analysis confirms that the value that participants place on experience outcomes does have some predictive value in terms of the support, or opposition, afforded to general management directions. At the level of specificity adopted, where both experience outcomes and management prescriptions are expressed in aggregates (the first as scores over a domain of related outcomes and the second as an index of broad managment policy), the proportion of the variation in respondents' scores on the three indices which can be accounted for by the variation in their scores on the various outcome domains is not unexpectedly small.

Respondent attitudes towards the managment of what is not only a recreation resource but also an internationally recognised wilderness, a World Heritage area and a National Park, will naturally be influenced by factors other than the values placed on particular experience opportunities. Furthermore, the analysis is based not on response to

present management attributes but on participants' judgement of future management prescriptions. The indices themselves also include items that attract particularly strong feelings such as the use of axes in National Parks. Nevertheless, the analysis does provide a number of insights into what participants perceive as possible effects of policies on potential experience outcomes.

With regard to in-park development, the regression equation yielding the highest value for the adjusted "R-squared" statistic and the minimum standard error was capable of accounting for only 3.4% of the variation in the scoring on this index and included only six of the 13 domains. The regression co-efficients were all minor, the largest being .135, indicating that changes in the scoring on the various included domains had only a small impact on predicted respondent views in terms of the index. In declining order of influence (absolute value of the regression co-efficient) the included domains were: Achievement, Family Togetherness, Equipment, Social Contact, Meeting/Observing Others, and Introspection. Support for additional development increased with increased value placed on Equipment and Social Contact (in-group), while for all other domains, the higher the value placed on the outcome the less the support for increased development.

For the exercise of management control over participant behavior, the best fit regression equation could account for

only 11.3% of the variation in the scoring on this index and included nine of the 13 domains. Again, the values of the regression co-efficients were very low; the highest being .166. Achievement, Nature/Discovery, Introspection, and Stimulation/Renewal all had negative co-efficients while Exercise/Physical Fitness, Social Contact, Autonomy, Risk Taking, and Freedom all had positive co-efficients. The latter are somewhat surprising and run contrary to expectations as it was expected that those who place higher value on such experiences as Freedom, Risk, and Autonomy would be expected to reject controls on participant behavior. This did not eventuate. In this instance, among rafters, the management presence is presently minor and an increase in management control, while impacting on such outcomes, may have been perceived generally to be an over riding necessity to the extent that participants, while valuing such outcomes, nevertheless supported increased controls on use.

Finally, 12.3% of the variation in the index scores relating to the provision of information and materials to participants could be explained by a regression equation which included six of the 13 domains. Achievement, Stimulation/Renewal, Nature/Discovery, Introspection, and Risk all related positively to the policy of providing more material to participants, while Autonomy ran contrary to it. It is unclear why those placing higher value on experiences associated with autonomy should reject increased efforts on

the part of management to make additional information available to participants. The positive reaction of those valuing the risk factor associated with rafting is contrary to expectation but may simply reflect the desire of participants to have all available information prior to engaging in what is, by the very nature of the river, a potentially hazardous trip.

VII.5. Discussion:

The Franklin - Lower Gordon Wild Rivers National Park offers a unique opportunity to raft a wild river in one of the last remaining south temperate wilderness areas in the world. It has also been a river noted for the serenity of its reaches and, due to its remote nature, limited access, and historically low visitor numbers, the solitude that can be experienced during the two week journey down its length. Consequently, it is an opportunity for which there are few if any substitutes.

While the Franklin - Lower Gordon is consistently rated very highly by participants there are a number of aspects of its use and management that are clearly of concern. The potential impact of crowding is one issue that should be monitored closely as the opportunity for experiencing the total isolation for which the river was known has already been diminished. In the user study of 1981-82, 8.4% of those polled reported encountering no one outside of their own

party while on the river. In 1982-83, only 1.2% of survey respondents reported no encounters. Conversely, those reporting eleven or more encounters rose from 5% to 19.9%. At the level of visitation of 1982-83, 40% of those sampled believed that the number of rafters on the river was too great. Further growth in user numbers, particularly around the peak Christmas - New Year holiday period, will result in a further reduction in opportunities for rafters to experience isolation.

For the majority of rafters the present level of crowding has not reached excessive levels as, overall, rafters still regard out-group contacts as contributing to their experience satisfaction as is indicated by the positive mean score on the out-group contact outcome domain. Nevertheless, a minority of users will likely be denied this opportunity during the most favorable rafting season and those who wish to experience the greatest degree of solitude will be displaced to the extremes of the rafting season.

The preservation of such an opportunity for total solitude on the Franklin - Lower Gordon in the long term may be neither possible nor justifiable, but consideration should be given to this aspect of the experience when establishing future use limits.

The view that steps should be taken to both protect the river environment and ensure the continued availability of

the types of experiences that it now provides is held by the majority of current users and there is strong support for the limitation of user numbers to achieve that end. The enforcement of some form of permit system to achieve this control had moderate support among survey respondents with a system based on the issuing of permits by advance reservation being the favored means of permit allocation.

This preference for advance reservations is in keeping with the long lead times that the majority of rafters require for the planning of a Franklin - Lower Gordon rafting trip. Weather conditions on Tasmania's West Coast are highly variable even in summer and the trip itself can be extended by three to four days by rains and high water. Unpredictable weather, the possibility of encountering extreme conditions and the nature of the river itself all call for a fair degree of preparation and planning, even for those in commercial parties. The great majority of rafters (90%) floating the Franklin - Lower Gordon are from mainland states. For these rafters planning also involves the booking of return air or ferry passage across the 250 kilometre Bass Strait during the peak summer season which itself can require considerable lead time. The generally long planning horizon, dependence of many users on plane or ferry connections, the necessary two week commitment to a Franklin - Lower Gordon trip and the expenditure involved (average expenditure including equipment and transportation in 1982/83 - $627) result in few individuals undertaking the

trip spontaneously. Thus, few would-be participants would be discriminated against if an advanced reservation based system were imposed.

There was strong rejection of the concept of permit allocation by lottery. This rejection is possibly due to the novelty of such a system being applied to recreation opportunity in an Australian context where the use of lotteries to determine access to recreation resources be they rafting, hunting or fishing is almost unknown. Given the pervasive nature of lotteries in Australian society, the rejection of this type of system might be overcome through the provision of more information on the workings of such a system if the number of permit applicants warrants such a development.

Of equal concern is the general view that the size of parties on the river should be limited to a smaller number than commercial groups currently organise. The Franklin - Lower Gordon is most suited to small parties and the great majority of rafters (75.7%) felt that party size should be limited. Private parties on the Franklin - Lower Gordon had an average size of less than five members which contrasts with the nine member average party size reported for the Snowy River in Victoria (Helman 1979).

The apparent suitablility of small parties for this river is reflected in the user suggested maximum party sizes which

are very low. Members of private and commercial parties alike took the view that commercial groups are too large and the size of such groups would have to be considered in any review of current permits.

As a group, rafters strongly rejected the installation of additional facilities and were approximately evenly split on the desirability of re-inforcing campsites to withstand increased use. Much more strongly favored was the imposition of use limits imposed beyond the park, that is, limits on party size and both seasonal and daily departure totals in preference to measures that would serve to increase the physical capacity of the park to withstand increased use.

It was anticipated that those with greater experience in rafting would give greater support to controls on access and use in order to provide necessary protection for the park. In fact, inexperienced rafters showed greater support for controls on numbers than more experienced participants. One possible explanation for this is that many of the novice rafters are not inexperienced wilderness users and place greater importance on the preservation of wilderness values than the more experienced rafters who might represent the more technically oriented type of participant i.e. rafting for the enjoyment and challenge of rafting versus rafting the Franklin - Lower Gordon as a means of visiting wilderness. This appeared to be confirmed by the fact that novices were more supportive of a ban on axes and saws and

the restricting of camping to designated sites but was confounded by their lesser support or opposition to management prescriptions directed at lessening the use of open fires and increasing reliance on fuel stoves. This could well be one area that could be targeted for additional user education.

Under current conditions of use and management presence, there is not a strong link between experience outcomes and attitudes and it would seem that the managerial environment is only a minor consideration to most participants with the various management options not strongly perceived as having major implications for participant satisfaction. Possible contributing factors to this perception might well include the level of awareness on the part of visitors of the limited resources available to the Tasmanian National Parks and Wildlife Service with which it can effect major policy changes; the current very low management presence; or participants simply not linking hypothetical management directions with their current experiences.

CHAPTER EIGHT

MANAGEMENT IMPLICATIONS

The Western Tasmanian Wilderness Parks not only comprise a large portion of the State's land mass, they also collectively constitute a major recreation destination for residents, a natural asset of world significance, and a cornerstone of Tasmania's image as portrayed and fostered in the national and international tourism market. For these parks to continue to grow in importance and value to Tasmanians will require management policies that, within the limits imposed by scarce human and financial resources, seek to maximize the satisfaction of consumers consistent with the protection and preservation of those qualities and opportunities that give them their unique character. The recognition of participants as consumers is a necessary precondition for success in that task.

The behavioral approach to recreation recognises the participant as consumer and has a consequent consumerist orientation. This project has sought, through this approach, to identify and describe the profile of the consumers who, in the short to medium term, will continue to constitute the primary market segment attracted to the wilderness parks. It further attempts to describe the recreation opportunities, to a degree user-defined, which are the attractions that draw consumers to the region.

In the longer term, management policy may be either to broaden and expand the target market and seek to provide a greater range and diversity of opportunities, or conversely, to narrow its focus and attempt to serve the needs of a much narrower market. But, regardless of eventual direction, the present need remains to understand the manner in which current consumers are served and how they may be better served.

A basic tenet of the behavioral approach to recreation is that recreation participation is both cognitive and directed towards predictable ends with choices of activities and settings made on the basis of anticipated outcomes. Environment and outcome are therefore linked, with a suitable environment being a necessary but not sufficient condition for the achievement of any given outcome. A far more direct relationship exists between the environment and opportunity - the opportunity for the participant to pursue those outcomes which a given environment encourages or facilitates. That particular outcomes are achieved is prima facie evidence that the environment provided meets certain minimum conditions. This information alone however has little predictive power as the key environmental elements are not easily identified.

A common approach in this area has been to attempt to identify and link those key environmental elements or

attributes which figure prominently in participant satisfaction with the achievement of particular outcomes. Rather than attempt to pursue that objective, this project was directed instead to the determination, not of how specific environmental elements contribute to participant satifaction but rather how, in the estimation of participants, that level of satisfaction can be sustained in the face of predicted increases in demand generally, and with particular reference to the Franklin - Lower Gordon Wild Rivers National Park.

The method adopted was based on two critical assumptions. The first is that participants will always seek to maximise the particular outcomes that contributed to their overall visit satisfaction; the second is that when providing an opinion or a view on future management options, participants will always select the option that, from their viewpoint, will either enhance their level of satisfaction with the outcomes of their participation, or, will have a minimal negative impact. This, of course, presumes that the individual participant can predict the likely impact of changed conditions on the type of opportunities available and the outcomes that will follow. It is precisely this capacity for prediction on the basis of previous experience, knowledge and anticipated conditions that is the basis of the overall decision model outlined in Chapter 2.

Participants can be grouped in any number of ways depending

on the purpose of the grouping. A common approach has been for participants to be sorted on the basis of similarity in outcome profile and the dominance of a particular pattern of outcome preferences so that within any particular activity it becomes possible to say that within the given activity or area there may be groups for whom particular outcomes are of such importance that they can be assigned very broad descriptive labels such as 'adventure seekers' or 'risk seekers', 'nature seekers', 'seekers of solitude', or groups for whom shared experiences, comradeship or the use of equipment is of paramount importance. These groups have an internal consistency of highly valued outcomes and external factors may then be sought as possible predictors of group membership. Attempts can also then be made to assess the manner in which particular facets of participation in that area or activity, or particular social, physical or managerial elements contribute to the satisfaction of selected subgroups of individuals with very highly congruent outcome profiles.

From an immediate management perspective, however, significant groups are already acknowledged by management - defined largely on an activity and infrastructure requirement basis and, in the initial stages, key questions are not directed at better serving newly defined subgroups, but are likely to continue to be pitched at the broadest and most general level possible. At this level, the objectives are to reach a better understanding of the most common and

important outcomes, and to meet the demands and aspirations of the largest possible aggregations of users. In the short to medium term, management and management policy decisions affecting the Western Tasmanian Wilderness Parks are likely to continue to be made on the basis of broad aggregations of users who have been identified as constituting the present and likely future user population.

In addition to identifying the broad market segment, the immediate questions which arise are those concerned with: identifying the most commonly valued outcomes and the ways and means in which the opportunities to pursue those outcomes may be preserved and enhanced; determining the largest possible aggregations of users that can reasonably be treated as common units within the region and the individual parks; assessing whether or not groups already receiving, or having been identified as possibly warranting, specific policy attention for whatever reason also warrant separate consideration on the basis of significantly differing outcome profiles; and finally examining the possible translation of this material into management prescriptions.

VIII.1. General Visit and Visitor Characteristics - Implications:

The most striking feature of the use pattern revealed in this study is that, in spite of their wilderness

designation, the region's parks are primarily short visit, minor incursion, day use areas. With the exception of the Franklin - Lower Gordon Wild Rivers National Park, 70% of all park visits have a duration of one day or less. The visitors to the region are, in the majority, first-time visiting (78.9%), non-Tasmanian tourists (73.7%). They are young adults who are well educated and mobile, travelling in parties split equally between couples and groups of four or more whose principal means of transport is the personal or rented car.

As the tourist travel pattern in Tasmania is predominantly based on fly-drive or own-vehicle ferry packages of approximately eleven nights duration with time spent in all quarters of the State, the pattern of visitation to the region's parks is consistent with serial stops at each of the parks along a preplanned road travel route with short duration visits and overnight stays at accommodation centres removed from the parks themselves. The region as a whole has an average visit duration of 2.8 nights (Evers et al. 1984) and, with the parks as the principal attractions, the short duration visit at each park centre generally makes up the bulk of the visitation.

Tasmanian residents who visit the region's parks are not, of course, constrained by the necessity of making aircraft or ferry connections nor is it likely that many Tasmanians would be attempting to tour the State within a fortnight.

However, the road distances between the park areas and the State's population centres are such that day visits are easily undertaken and the pattern of use for local residents is essentially similar to that of tourists with the exception that residents are more likely not to be first time visitors.

Many of the characteristics of the short duration day use visitor are equally applicable to those visitors who participate in developed area or vehicle based camping. Again the great majority are first time visitors (68%) who do not remain in any one park for an extended period. Of those participating in this type of activity, just over 43% limited their stay to one night with less than 13% staying longer than three days. The essential difference here is that this group accommodate themselves within the park areas rather than overnighting at a centre elsewhere in the region. On average, the party size of those participating in vehicle based camping or caravanning is larger than those involved in simple day use which may be a reflection of the relative cost of accommodating family groups in motel style units as opposed to the minimal site costs within the parks.

Once again, the general visit characteristics of Tasmanian residents participating in this type of activity match those of visitors from interstate. Visit durations are in the order of one to three nights with fewer than ten percent of

Tasmanians remaining in a developed area facility for more than three days. In the absence of other external factors or pressures, the combination of poor facilities for this type of visitor and the minimal level of interpretive or other activities to sustain the interest of this type of party may be factors which contribute to limiting visit duration.

Assuming that the general pattern of tourist travel to, and visit duration within Tasmania remain reasonably static within the limits normally imposed by a two week holiday, it can be anticipated that the average visit duration for interstate visitors within the wilderness region is unlikely to increase significantly. For it to do so would require a change either in the nature of visitation to Tasmania (away from general tour oriented and towards greater destination tourism) or a shift in the region's tourism market share at the expense of other regions with a greater tour proportion being spent in the south western quarter of the State. As the principal attractions and facilities are government owned, they are generally promoted in the context of the entire State and any change in market share would likely be incremental arising from improved access to and within the State as well as improvements in the stock and location of accommodation facilities. Any immediate growth is therefore likely to be in terms of gross numbers with any change in the pattern taking place over a considerable period.

New, private sector facilities and destinations are being

developed based upon the natural features and attractions of the region and these would be expected to generate additional destination tourism. They can be expected to contribute to the number of visitors to the region's parks but their principal impact will be in the immediate vicinity of the development sites which are removed from current high use areas although they will probably contribute some additional day use to the major centres.

As a result, visitation is likely to continue to be predominantly day-based, serial, first-time, and largely limited to those hours within an envelope which allows for travel to and from accommodation centres. Improvements in ferry services, marketing efforts, image, and the popularity of 'nature' based tourism may result in greatly increased visitor numbers, but visit characteristics may be much slower to change. Requirements will generally be for easy and direct access to points of interest in the immediate vicinity of visitor service centres. Keeping to fairly structured but individually based schedules, anything other than 'on demand' services would be unlikely to provide for such visitors' needs.

While growth in overall visitor numbers may be reflected in increased demand for developed area camping, it is unlikely that demand will keep pace with any general growth in visitor numbers and it can be anticipated that, while vehicle based, any increased demand is likely to be

primarily for tent camping rather than trailer or caravan use. Growth in the use of the latter two accommodation types will be hampered by the shortage and high cost of vehicle deck space on the principal ferries serving Tasmania during the peak holiday season and future success in attracting greater numbers of visitors could result in yet greater disincentives to bring overlength or towable units into the State. Growth in trailer or caravan use demand would therefore arise primarily from within the State.

In contrast to the general pattern of short stay, minor incursion visitation, there are two important minority user groups each of which display markedly different characteristics. The two groups consist of those who bushwalk within the region and those who raft the Franklin - Lower Gordon Rivers. They differ from the norm in that they are destination visitors whose entire visit may be spent within one park. Visit duration is characteristically long and their activities, while generally confined to specific corridors, take them well away from visitor service areas. They are self contained but take advantage of facilities at terminus locations. In spite of their comparatively small numbers they are the principal consumers of wilderness and will have the greatest impact on those elements which define it.

Bushwalkers are medium to long duration visitors with approximately half (51%) having visit durations in excess of

three days. Moreover, among those who participate in extended walks, the majority (59.4%) are repeat visitors to the particular park in which they were contacted in the study survey and are out of state residents (61%). Just over sixty percent hold university degrees or diplomas. As a group, bushwalkers tend therefore to be highly educated, experienced, repeat visitors spending a lengthy period in a park that was specifically selected from a range of options that would be available to individuals with the resources to travel from interstate. Apart from place of residence, Tasmanian participants show no significant variation in this regard from their interstate counterparts.

Rafters share many of the characteristics of bushwalkers. They are long duration visitors, normally spending the whole of a fortnight in the one park and they have come to a selected destination in order to participate in a specific activity. Unlike bushwalking however, rafting is an activity which has only recently begun to expand in popularity and rafters tend to be largely both first time participants (90%) and first time visitors to the State (81%).

Consistent with the very high proportion of short stay, vehicle based, minor incursion visits, the most frequently reported visitor activities were sightseeing, daywalking and photography. Two thirds of all visitors to the general use parks in the region reported participation in these three activities. Once beyond these three most popular activities

there is a major drop of some thirty percent to the participation rate for the next most popular activity, picnicking or barbecueing, in which some 37% of park entrants participate (Table 8.1).

The predominance of sightseeing is further emphasized by the fact that not only do the majority of park entrants sightsee but just approximately forty percent of all park entrants responding to the survey rated sightseeing as the most important activity undertaken. Among those who indicated that sightseeing was one of the activities participated in, exactly half claimed that, to them, it was the most significant aspect of the visit. Sightseeing, combined with daywalking, photography, and picnicking/ barbecueing, together account for just over 75% of participants' 'most important' activities.

The importance of sightseeing and (to some extent) daywalking to park users contrasts sharply with photography, an activity which attracts almost as many participants. Two thirds of those entering the region's parks took photographs, but only 6.9% reported it as being the most important activity undertaken and only a tenth of those who did take photographs in the parks regarded it as the most important activity.

Regardless of the activities participated in, and the majority of respondents participated in several, it is clear

TABLE 8.1

ACTIVITY PARTICIPATION AND IMPORTANCE

Activity	% Indicating Participation	% Nominating As 'Most Important'	% Of Participants Nominating As 'Most Important'
Sightseeing	79.8	39.9	50.0
Daywalking	68.1	21.5	31.6
Photography	66.5	6.9	10.4
Picnicking/BBQing	37.0	7.4	19.9
Climbing	18.5	2.4	13.0
Tenting	17.4	5.0	28.7
Backpacking	12.9	9.4	72.5
Fishing	12.1	2.1	17.4
Trailer/Caravan Camping	6.8	1.5	25.2
Other *	3.6	2.9	80.5
			(n=1114)
Rafting/Canoeing	100 **	99.9	99.9
			(n=809)

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* This category included activities nominated by respondents such as: swimming, painting, drawing, nature study, birdwatching, fossicking, partying/drinking, meditation, rock climbing, and volunteer trail and hut maintenance work.

** As rafting is specific to a single park and location all respondents sampled at that site were involved in the single principal activity. It was therefore treated separately from activities where participation /non-participation had a random element.

that some are central to the participants' visit while others are ancillary or peripheral. Sightseeing is both very popular and very important to those who participate while photography, which is almost as popular, is perceived to be far less central. In the middle range, picnicking or barbecueing are important activities but just over 80% of those who engaged in these activities nominated some other activity as being more important to them. At the other extreme, only 12.9% of the park entrants went bushwalking but, in spite of the great diversity of other activities engaged in while on a bushwalk, among those who did bushwalk 72.5% considered it to be the most important activity engaged in.

Those undertaking the trip down the Franklin - Lower Gordon also participate in a wide range of activities. All carry their own shelter in the form of tents; the majority take photographs; many take side trips or short walks either to the peak of Frenchmans Cap or to the cave sites along the river; many fish and a great number swim - whether voluntarily or not. The nature of floating the Franklin - Lower Gordon and of its participants is reflected however in the fact that regardless of the other activities undertaken, all are considered by participants to be secondary to the main purpose of the visit. Virtually all of those surveyed on the river viewed rafting or canoeing as the most important aspect of the trip.

In terms of outcomes, the most important and satisfying aspect of the recreation engagement for all participants, regardless of the park, activity, setting, or any other factor considered, was the opportunity to achieve those satisfactions resulting from experiences associated with the outcome domain Nature/Discovery. The scale items in this domain included both 'contact with nature' through scenery, sights and sounds of nature, perceptions of being in natural surroundings as well a degree of novelty and the opportunity to learn about and experience nature first hand.

The perceived 'naturalness' of the region is the single most important contributor to visit satisfaction. For the great majority of users this is then followed by a grouping of three equally important experience opportunities, those labelled Social Contact (in-group), Exercise/Physical Fitness and Escape - a pattern that was uniform for all of the general use park areas.

In spite of differences in managerial input, development, and access, the resulting settings within the general use parks are not sufficiently different to result in gross differences in the perceptions of users. The strongest perceptions of survey participants are of the parks' natural qualities, the peace, quiet and tranquility of the areas, the potential for skill development and use, and the opportunities to engage in in-group social interaction. The region is thus seen as providing relatively common

experience opportunities.

On the basis of the selected activity groupings considered (daywalkers, picnickers, sightseers, developed area campers, bushwalkers, and rafters) only three easily distinguishable groups of participants could be established on the basis of their domain scores. These three groups consisted of rafters, bushwalkers, and all others. While differences did occur among the participants in the particular activity groupings for most domains, the complete profiles were not sufficiently different to allow reliable discrimination beyond the three broad groupings.

Excluding the two minority groups, the 'all others' are the minor incursion visitors who make up the bulk of park visitors - the sightseers, daywalkers, picnickers and developed area campers who seek a generally common set of experience opportunities. The variation in the experiences sought among these participants does not correspond to any differences in specific activity or activities, or duration. The minority groups which again stand out are those who visit the region to go bushwalking or to go rafting.

Rafters stand out because not only does the profile of valued domains differ from mainstream users, but also because the domain means are more extreme, both positively and negatively. After Nature/Discovery (of which novelty is a significant contributor), the major contributors to visit

satisfaction are Achievement, followed by Stimulation/Renewal and Escape, Risk, and finally Social Contact and Exercise/Physical Fitness. Rafters are the only group for whom outcomes linked to family relationships and shared experiences are essentially irrelevant.

As with rafters, bushwalkers display a significantly different profile of valued outcomes. While Nature/Discovery is still of greatest importance, they are less extreme than rafters with the exception that they assign much greater importance to Exercise/Physical Fitness than any other group and do so to the extent that it is almost as important as Nature/Discovery. In addition, while they may participate in areas as remote as those engaged in raftering, they assign significantly less importance to the element of Risk and are more inclined to participate with a family member.

The picture that emerges is one where, in the vast majority of cases, parties visit the parks, as part of a regional visit, on a short stay basis, engage in multiple activities including short to medium length walks in the vicinity of the visitor service areas, possibly involving moderately steep tracks in some instances, take a number of photographs and, in just over a third of the cases examined, have a barbecue or a picnic. They perceive and define their principal activities as sightseeing and/or walking. Approximately 24% of visitors remain in the parks for one or more days with around 11% being accommodated in the

developed camping areas and 13% walking with tents further into the parks. Of the latter, only half remain in the parks long enough (3+ days) to get further from the visitor service areas than one and a half days' walk.

While the use of particular equipment types (tents, trailers, caravans) is an important component of the visit, the great majority of those using these types of equipment view other activities undertaken in the course of the visit as being more important. Only two activities are seen by the overwhelming majority of their participants as being the principal, most important aspects of their visit: bushwalking and rafting.

The most highly valued experiences are those arising from participants' perceptions that they are in a natural area of outstanding scenic beauty where they can come into close contact with nature and develop a better understanding of it while discovering something that is new and different to them. For the majority of visitors whose experience of the parks is likely to have been limited to the immediate vicinity of the visitor service areas, regardless of the activities engaged in, there is a great similarity in outcome profiles. That small minority of visitors who venture into the interior of the parks display different profiles with rafters' profiles dominated by Nature/Discovery related experiences while bushwalkers value the Exercise/Physical Fitness aspect of the engagement

almost to the same extent that they value Nature/Discovery.

It is therefore appropriate that management address user demands, in the initial stages, on the broad basis of whether the facility is to cater for the needs of the majority of visitors who cannot easily be segregated into groups on the basis of activity and experience outcome preferences, or those whose more specific activity and outcome objectives enable greater differentiation.

VIII.2. Developed Area Management:

At the onset, it must be noted that the pattern and nature of visitation to the general use areas is such that neither the recreationist's decision model nor the hypothesised recreation demand hierarchy, as outlined in Chapter 2, may offer a great deal of assistance to management at this level.

It is fundamental to the decision model that the decision to participate in any given activity is a process which is influenced by a number of factors among which are the internal characteristics of the individual, including recreational antecedents and similar or comparative past experiences, and external factors such as the level and availability of information making choice possible. The recreation demand hierarchy suggests that the eventual choice is exercised through a selection of activities,

settings, resultant sought-after outcomes, and ultimately, benefits.

The difficulty that arises is that for a large proportion of visitors to, and users of, the develped areas, the site-specific information available to them and their prior direct knowledge and experience, in all likelihood would have been relatively sparse or non-existent. Moreover, their selection of particular on-site day activities - picnicking, daywalking, photography and the immediate physical and managerial settings in which they took place would again, in all likelihood, not have figured prominently in the decision making process which resulted in their visit - the main portion of which took place prior to the crossing of Bass Strait and their entry into Tasmania.

It is probable that, for the majority of visitors, the principal activity the demand for which was a causal factor in undertaking the trip can best be described as travel-tourism and the preferred setting(s), a diversity of non-specific 'natural scenic' areas. Neither of these possibilities reduce the validity of the models, but they do suggest that the activity - setting complex being sought is not a highly specific one. In terms of the recreation opportunity spectrum, the day use areas are perceived as occupying a single locus and the immediate site of the visit and any one particular on-site activity are not sufficiently dominant to define the visit. It then follows that the

likely impact of management policies governing particular aspects of those activities and settings on expressed visit satisfaction will be less than if they were central to the decision to visit the park. It also brings into question the utility of seeking further differentiation of the participants in order to assess the potential effect of management policies on the visit satisfaction arising from participation in specific, narrowly defined activity settings for particular subgroups when those specific activity settings may not be the principal focus of demand.

It is suggested that the management of the developed areas of the parks, that is, the high use areas in the proximity of the visitor service centres, should be directed at meeting, at the most common level, the needs and aspiriations of that majority of park visitors whose penetration into the parks is minor and whose visit duration is short. Moreover, the outcomes and satisfactions sought by such visitors can confidently be considered congruent regardless of the specific activity being catered for. Due to the high levels of use, these areas are the least natural, most highly altered areas with the greatest degree and ease of management presence and input.

The visitors to these areas are, as previously indicated, primarily first-time tourists travelling independently in small parties whose visit is part of a larger tour. They are highly mobile, young to middle aged, highly educated and of

sufficient means that the cost of travel to Tasmania by air or sea was not a deterent. In view of preplanned itineraries they are often on reasonably fixed schedules. A small proportion of developed area users accommodate themselves within the parks but the majority overnight in accommodation centres elsewhere.

Once in the parks, developed area users participate in a range of activities but tend to define their main purpose/activity as sightseeing or walking. Approximately one quarter of those entering these areas will also participate in a picnic or barbecue.

The most overwhelmingly important outcomes for these visitors are those arising from the region's perceived character as being fundamentally untouched, a natural area, a wilderness in spite of the obvious infrastructure. The most highly valued outcomes result from the opportunities for enjoyment of the scenery, the sights and sounds of nature, exposure to something new and different for what are typically urban residents, and the chance to learn something about the natural environment. Of secondary importance are the social aspects of the engagement, physical activity, and escape from normal routines, pressures, and stress.

It follows directly from the nature of this type of visitation that the visitor service centres and their immediate surrounds will remain the focus of activity. On

limited duration, often serial visits, critical factors to the success of the visit will likely be the availability and immediacy of the sought-after experience(s). Having left their vehicles, the opportunities that should arise as quickly as possible are those providing exposure to the external environment and the opportunity to learn something about it.

The latter can be provided by interpretation programmes directed at satisfying the demand for opportunities to increase knowledge and understanding. Characteristics of the visits and visitors being what they are, such programmes would best be provided on demand, be self-guided, outdoors, and, if linked to a system of walking trails, can contribute to both social aspects of participating in a small group activity as well as providing physical activity. As many visits are serial, particular programmes can be park specific while contributing to a regional theme. It is also important that such programmes recognise the high level of education of most visitors and be pitched at an appropriate level.

Whether linked to an interpretive programme or not, developed area users are supportive of limited upgrading of access. Access should remain limited in type and extent however with additional roads within the parks being unsealed gravel; travel beyond designated access roads limited to foot traffic; and walking tracks upgraded to a

standard that would see extensive use of duckboarding and improved signage. The latter is important for, while both access and signage are at an acceptable standard for the majority of participants, access was consistently rated more highly than information and directional signs on tracks, trails, and points of interest.

While the level and standard of facilities provided vary from park to park, users were largely of the view that they are currently provided at an acceptable level in all areas. Facilities of some description are considered essential but views on the appropriateness of development to cater for increased use was split between outright rejection and approval on a strictly limited basis.

The exception to this generally held view was expressed by the minority of developed area users who accommodated themselves in the park areas - either in tents or caravans/trailers. This group is poorly served and some 20% of those categorised as developed area campers expressed the view that essential facilities are lacking. While remedial action is clearly warranted, in light of the possibly limited growth in caravan or trailer use, additional facilities should be geared to tent users with the provision of central facilities in preference to individual site development.

The view that additional facilities are not required may

well be a reflection of participants' perception that current facilities adequately cope with present user numbers. The most commonly reported frequency of out-group contacts was between 25 and 50 and most participants characterised the encounter rate as 'frequent'. Where the encounter rate was higher, as in the case of Lake St Clair where almost as many respondents reported encounter rates of between 50 and 100 as reported rates between 25 and 50, the most common characterization was 'very frequent' and some 27% of respondents regarded the park as too crowded. However, as the examination of the outcomes achieved by those same individual indicates that current levels of crowding do not have any significant negative effect on the satisfaction levels of present participants, it should not be regarded as indicative of incipient overcrowding.

The value and importance that participants placed on the various experience outcomes were reflected in the views expressed on particular management issues; significant but very weak correlations were revealed between scores on certain outcomes and views on management actions that participants might view as having a potential effect on the availability of opportunities to achieve those outcomes. Among the sightseers, daywalkers, picnickers and developed area campers, those who placed greater value on the satisfactions arising from Achievement, Risk Taking, and Exercise/Physical Fitness tended to favor less management presence, no improvements in access, and no facility

development. Conversely, and as would be anticipated, those who placed greater emphasis on more social aspects - Family Togetherness, Social Contact, and Meeting/Observing People favored greater development and improved access.

The overall value and importance placed on these outcomes, while not sufficiently discriminating to provide reliable separation of sightseers, daywalkers, picnickers and developed area campers, did reflect, to a degree, the activity setting in which participation took place. Although there was a great deal of overlap and no significant differences in the mean scores of these groups, those favoring outcomes more associated with primitive environments tended to remain in the parks longer (full day vs half day) and be more active (daywalking vs sightseeing or picnicking).

From a management perspective this implies that a rapid gradation from the more developed to the less developed within a radius of a one hour walk from the hub of the service centre might provide the necessary range of conditions to meet the needs of the greatest number of visitors, as those who valued those experience outcomes associated with more primitive environments spend more time in the parks and presumably would be willing to venture further from the visitor service areas to achieve them, while those who placed greater importance on social aspects tended to be either the shorter duration visitors or those

engaged in developed area camping who would have the obvious option of penetrating further into the parks on daywalks.

The needs of those using the developed areas can best be met by improvements in the standard of road access to the visitor service centres and within their immediate proximity; maintenance of the general level and standard of facilities with additional developments being initiated only where significant growth in visitor numbers occurs, with the exception of immediate improvements for those engaged in vehicle based camping; and the development and upgrading to the level of duckboarding, a variey of short, easily accessible walking tracks and improved interpretation. All of these initiatives would have greatest impact on the opportunities available to those with the shortest of visit durations, many of whom, if they do not camp, remain in the park for less than half a day. By rapidly diminishing the level of obvious management presence either by walking distance or corridor selection, those visitors seeking more primitive conditions can, to a degree self-select the conditions most conducive to the outcomes sought.

VIII.3. Bushwalking Area Management:

Bushwalkers are one of the significant minorities among the park visitor categories. In common with those who limit their visit to the more developed areas, the majority of

visitors who venture further into the parks, some 61%, are from interstate. However, unlike the developed area visitors, the great majority of whom are first time entrants, approximately 50% of those participating in bushwalking, are return visitors. Moreover, among those participating in extended walks of greater than three days duration, the proportion of return visitors rose to some 59%. Bushwalking also had a tendency to attract a greater proportion of young adults with 58% being between the ages of 19 and 29. They were also more likely to have completed a higher level of education with some 60% having degrees or diplomas; and they most commonly travelled in two person parties.

The nature of bushwalking in Tasmania and the characteristics of the survey respondents who participated in it are such that the activities undertaken in the parks and the specific settings in which that participation took place would likely have been far more central to the overall decision process that brought them to the park than would have been the case with those interstate visitors whose entry to the parks was both brief and relatively shallow and whose visit was limited to the immediate proximity to the visitor service centres.

As repeat participants in an activity that requires significant amounts of equipment, those involved would generally have possessed both considerable previous

experience in the activity and knowledge of the setting in which they would be participating. In view of the high proportion of bushwalkers who also viewed this activity as being the most important to them of the visit, it might also be assumed that these individuals were quite deliberate in selecting this particular activity, in this particular setting, as the basis for their visit to the State and/or region.

As was the case with all other visitors to the wilderness parks, the experience outcomes that were of the greatest significance to bushwalkers were those associated with Nature/Discovery. Unlike other participants however, the gap between the importance of this group of outcomes and others was not so dramatic. Of almost equal importance to bushwalkers were the experience outcomes linked with Exercise/Physical Fitness. In addition, the outcomes associated with Escape, Stimulation/Renewal, Social Contact, and Achievement were also rated as having contributed strongly to overall visit satisfaction. Of all groups bushwalkers scored highest on the experience outcomes associated with Exercise, Escape, Stimulation/Renewal, Social Contact, Autonomy, and Freedom. Clearly, while the natural qualities of the area are of great importance, the strenuous nature of the activity is also important as are the opportunities to participate in a shared activity where the frequency of outgroup contacts is low, and where the experiences of excitment and feelings of achievement and

accomplishment can be had in the context of moderate perceived risk.

If it is accepted that participants can be expected to give greater preference to management strategies which will facilitate, or are perceived to be least threatening to, the opportunities to pursue valued outcomes and satisfactions, and that their judgements regarding present conditions will reflect the degree to which those opportunities are supported, then in most respects it appears as if the needs of bushwalkers are being properly met.

As a group, bushwalkers rate the areas highly. While being the least inclined to rate the area visited as being in 'very good' condition, all considered the areas to have been either 'fair' or 'very good' with none whatsoever rating them as 'poor' or 'very poor'. With respect to the levels of facilities provided in the parks, they are strongly of the view that only those facilities required for basic safety should be provided and the vast majority, some 84.5%, feel that the present facilities provided are appropriate to that purpose. Nevertheless, some 8.6%, the highest of any user category, expressed the view that management currently provides excessive comforts and conveniences. Access is adequate and, perhaps predictably, the majority of bushwalkers opposed any further road development within the parks.

The one area where bushwalkers may be less than well served in terms of their expectations and needs is in respect of the general level of track development and the condition of the tracks. Unexpectedly, bushwalkers were as strong in their support for improved sign posting and greater use of duckboarding as were the developed area visitors. This support may reflect a realization by participants of the fragile nature of the vegetation and substrate in some areas and a recognition of the need for improved track standards to prevent excessive track deterioration. Another, and more likely reason, is that the poor condition of some sections of a number of popular walking tracks resulted in bushwalkers being both less inclined to rate the condition of the areas as highly as other visitors and to support greater management presence in the form of more developed tracks. In either event, some 60% of participants in this activity are of the view that greater use should be made of duckboarding and that increased signage is necessary. At the same time a significant proportion of bushwalkers, some 10%, support the marking of walking tracks by stone cairns only.

Just over one quarter of participants offered support for the re-inforcement of specific sites to withstand greater visitor use with a similar proportion opting for the closure of areas showing signs of overuse. Far greater support, however, was given to the restriction of visitor numbers as the best way of preventing damage and deterioration.

In terms of management, it appears that the bushwalking areas presently provide the necessary opportunities to pursue participants' valued outcomes. The principal area for improvement is the condition and standard of walking tracks, including the level of signage. Other developments, improvements to, expansion or extension of facilities, huts, or road access, should be carefully considered in light of the strong participant rejection. While most types of development were rejected, a significant proportion of participants perceive site re-inforcement of high use areas as acceptable and this, in conjuction with the range of views on improved tracks and signage, is indicative of bushwalkers seeking a range of settings within the parks in which to participate. These settings range from the well marked, heavily travelled, primary corridors to the very remote, seldom visited areas where few if any tracks are marked by other than small stone cairns.

By limiting upgrading and management presence to the popular and heavily travelled routes, management can provide a mid-range environment for those participants who accept limited development and who are chiefly seeking opportunities for nature contact and exercise in a social setting with a low risk factor. By limiting such upgrading to the primary use corridors, it would be possible to provide for the demands of those users while limiting encroachment into areas incapable of withstanding increased use.

The bushwalking areas provide the greatest possible range of social and managerial environments, from maintained, partially duckboarded tracks that see frequent use, to very large, remote and totally primitive areas where out-group contact would be most unlikely. In view of the small sample size of bushwalkers, no attempt was made to investigate the existence of subgroups (either on the basis of the specific track used or experience outcome profile), or their associated views on management options but given the range of opportunities available and the capacity of bushwalkers to self-select the 'primitiveness' of the areas in which they intend to walk, and the low overall number of visitors to the very remote areas, it is unlikely that those seeking even the most primitive settings will lack appropriate opportunities in the immediate future.

In the longer term, the use of site closure and overall limitation of numbers, both of which have a reasonably high level of acceptance, might ultimately be used in the more remote areas to effectively maintain opportunities for the smaller number of participants who reject increased management presence and who are seeking more primitive environments.

It was presumed that the processes of recreational decision making and choice of activities, settings, and subsequent outcomes for bushwalkers would be far more tightly focused

on this specific engagement than was the case for the more fleeting visitor and, in view of the greater levels of experience and knowledge possessed by bushwalkers, it was further assumed that there would be fairly strong links between valued outcomes and expressed views on general managment direction. It transpired that this was not the case. The correlations that occurred between values placed on the achievement of particular experience outcomes and management options were few and weak. In general terms, participants who placed higher values on those outcomes associated with Meeting/Observing People, Freedom, and Equipment tended to favor the provision of additional facilities. Similarly, those bushwalkers who more highly valued Social Contact, Equipment and, unexpectedly, Exercise/Physical Fitness tended to favor improved access and fewer restrictions on means of access.

The small number and weakness of the correlations, as well as the fact that the majority of correlations were between management options and the less generally valued outcomes, results in there being little indication of whether, in the minds of participants, there is any common perception that particular managment options would have a major impact on the opportunities available to pursue the most important experience outcomes, nor whether those seeking the particular outcomes most highly valued by bushwalkers associate their pursuit with a particular management regime. At this level of aggregation, views on management and the

value placed on the experience outcomes participants associate with the engagement were relatively independent and little assistance is given to management in assessing the possible impact of managerial initiatives on the availability of opportunities to achieve specific experience outcomes as perceived by bushwalkers as a group.

VIII.4. Rafting Area Management:

Rafters are the second of the significant minorities among park visitors and, like the majority, are generally first time visiting non-residents. To an even greater extent than users of the backcountry bushwalking or more developed areas, those floating the Franklin - Lower Gordon Rivers are from interstate. Approximately one quarter of rafters in the first season of the study were Tasmanian, reducing to a tenth in the second as numbers rose. Fewer than 10% had visited the Franklin Lower Gordon Wild Rivers National Park previously and more than 80% described themselves as 'beginners' or 'novices' in respect of rafting skills and experience.

Like bushwalking, rafting attracts primarily young adults with some 65% being between the ages of 19 and 29 and approximately 94% being under 40. It is also an activity where a great many of the participants possess tertiary qualifications with some 65% having degrees or diplomas.

For individuals making the trip down the Franklin - Lower Gordon Rivers, it is likely to be their principal annual recreation experience. It is a long duration (12 to 14 days) wilderness trip that can be cut short, in most instances, only by abandoning considerable amounts of equipment and either walking out or, in medical emergencies, being lifted out by helicopter, there being no other vehicle access. It is a trip that requires a considerable degree of group self-sufficiency and has a high level of uncertainty and risk associated with with it compounded by often unpredictable weather conditions and water levels.

Regardless of whether the trip is privately, commercially, or club organised, participation would rarely be spontaneous and most participants would undertake a considerable amount of research and planning. Given the amount of effort and the cost, the motivation to participate would be fairly strong among those who undertook the trip. Nevertheless, for the majority, it is a trip into the unknown. Few have any previous rafting experience and fewer still have any experience on the Franklin - Lower Gordon Rivers. While participants generally lacked prior direct knowledge or experience, the selection of the activity and setting are highly specific despite the uncertainty of possible experience outcomes. These would be anticipated largely on the basis of information derived from print and electronic media. The very recent rise in the popularity of the park

and the small total numbers involved in rafting would tend to preclude any great degree of personal contact between those who had rafted the Franklin - Lower Gordon Rivers and would-be participants.

In common with all other visitors to the wilderness parks, the experience outcomes that were of the greatest significance to rafters were those associated with Nature/Discovery. Rafters scored this outcome domain more highly than any other user group and were the only group whose mean score of this outcome domain's contribution to overall visit satisfaction was higher than three (out of a maximum possible score of four). Nature/Discovery was followed closely in importance by Achievement, then Stimulation, Risk and Escape, followed by Social Contact and Exercise. While the natural qualities of the area are of paramount importance to visit satisfaction, floating the Franklin - Lower Gordon Rivers also provides an exciting challenge with a strong element of risk in a new and different environment far removed from participants' daily lives and routines.

From a management perspective, the most obvious and directly relevant categorization of rafters is one based on the type of party - whether it is a commercially organised tour group; a private party; or one organised through a club or society. Of the three, the first two are the more important accounting for 95% of participants but all three provided

their members with perceived opportunities for slightly different experience outcomes.

Commercial tours are normally large parties of eight to ten individuals under the leadership of a professional guide. They are run on a permit basis administered by the park authority and operate on a relatively fixed schedule. Permit conditions provide for ease of monitoring, control and communication and direct management intervention is easiest with these groups as they are basically business ventures. For participants, they provide a guided, equipped and provisioned, lowest possible risk environment for individuals without the necessary equipment (other than a wetsuit), skills and experience.

Private parties, though more variable, are smaller groups most commonly consisting of four individuals. As no permits are required for private parties, they are entirely unscheduled and unpredictable both in frequency and in specific trip content. Any monitoring must be on-site and control and communication are more difficult as the participants are unknown and there are no established communications. Being self-organised and self-directed and usually made up of a party of friends there is greater autonomy, responsibility, and commitment in terms of equipment and planning.

The last group consists of those whose trip is undertaken as

part of a club or society - primarily rafting, canoeing, kayaking and outdoor adventure clubs. The parties are generally small, again most commonly four individuals. They tend to be more skilled and experienced in the activity although not necessarily in this particular setting. As non-commercial and therefore non-permit parties these groups are unscheduled and largely unpredictable although more activity-concentrated than the previous group. An important difference between these and the more common private non-organisation based parties is that they are better known and communication with parent bodies provides an avenue for information dissemination.

While the most important experience outcomes for all of the above groups remains Nature/Discovery, its absolute and relative importance, and that of a number of other experience outcomes, varies from group to group in the above categorization. The major differences between the first two groups follow logically from their organisation. Commercially run trips offer greater direction and leadership and often consist of individuals who are meeting each other for the first time on this particular trip. It follows that participants derive less satisfaction from experiences associated with Autonomy, Risk, and Social Contact, and greater satisfaction from Meeting/Observing People, than do members of private parties. Among members of club or society based parties, Nature/Discovery remains the most important outcome domain but it is not generally scored

as highly as it is by others. The development of skills is more highly valued and there is a lower perceived contribution to satisfaction through Risk. Autonomy rates highly as do both Social Contact and Meeting/Observing People.

In spite of these differences, the range of values assigned to the various outcome domains by participants in each party type is such that outcome scores can not be used to successfully discriminate among party types nor reliably predict which type of party a respondent would be participating in. As the party types reflect what can be described in some respects as essentially different social and managerial environments it further follows that, in spite of the differences, it is not possible to ascribe to them the facilitation of the pursuit of significantly different experience outcomes. Nevertheless, the distinctions remain managerially significant and do present different opportunities and challenges for management.

If, in the longer term, there is to be any significant change in the importance of these three groups in terms of their relative numbers, one indicator of the possible direction of that change is the fact that commercially run trips do not attract return visits. Other than the tour leaders, members of such parties were uniformly first time visitors and in view of the lesser required commitment in terms of equipment, these parties might also be expected to

attract the higher proportion of individuals who are not particularly interested in taking up a new activity but, in view of its World Heritage status and high media profile, are strongly motivated to see the Franklin Lower Gordon Wild Rivers National Park and who accept that this is the only way to do so.

Return visitors to Tasmania or those intent on taking up the new activity are more likely to be in privately organised groups and, given the scarcity of white water rivers in Tasmania and elsewhere in Australia, are more likely to be repeat visitors to the Franklin - Lower Gordon Rivers. Over time, the private parties may therefore show increased numbers of experienced individuals and, as other areas become the focus of public attention, represent a greater proportion of total visitors.

A number of other groupings of rafters selected on the basis of degree of experience and whether the respondent was a Tasmanian resident or from interstate were also examined, but again, while a number of differences in the values assigned to the various outcome domains were apparent, the differences were largely non-significant and could not be used to successfully discriminate among the groups. None of the aggregations deemed to be managerially useful prior to the analysis could be shown to have significantly differing outcome profiles and therefore the factors on which the groupings were based could not be said to contribute to the

perception of uniquely different experience opportunities in the minds of present participants.

Different aggregations of rafters, based not on external characteristics deemed significant to management, but on similarity or congruency of valued experience outcomes, may be possible but the usefulness of such aggregations to management would be limited. Unlike the bushwalking areas where a wide range of opportunities exist and specific tracks, corridors or areas can be subjected to different management regimes to tailor the settings to meet the demands of bushwalkers seeking particular experience outcomes, the Franklin - Lower Gordon Rivers function as a single, continuous corridor with highly limited access and egress. Consistent with the preservation of the area, the management objective remains to provide for the pursuit of experience opportunities that are most valued by rafters in general. The limits of potential management action to affect group specific opportunities will continue to rest with readily identifiable groups over which a degree of control or influence can be exercised in a differential fashion. Where such groups do not demonstrate significant differences in valued and sought-after experience outcomes, management must proceed on the assumed basis that there is a high degree of homogeneity in preferred outcomes.

Those rafting the Franklin - Lower Gordon Rivers were, on average, the most satisfied with their engagement of all

park users and just over 90% of respondents gave the park the highest possible overall recommendation. Moreover approximately 80% of participants also rated its appearance as 'completely natural'.

As generally very satisfied participants in the most remote and primitive environment, rafters' views on general management prescriptions reflect a preference for policies that will maintain its wilderness character with minimal change. There was an overwhelming opposition to the incursion of any roads and strong majority support for the propositions that there be neither additional facilites provided nor any modifications to support increased use. In contrast to bushwalkers and other more developed area users, rafters held the views that walking tracks in the park should either remain unmarked (33%) or be marked only by stone cairns (42.9%). There was a strong belief that management should rely on participants' common sense to control behavior and a conviction that the most appropriate means of protecting the park is to restrict entry and limit total user numbers (92%).

That restrictions on access may become necessary is a possibility but from current participants' viewpoint it is of concern though not an immediate problem. Despite a significant proportion of rafters (some 36%) assessing the park as 'too crowded', in the main, even among those so judging it, the effect of outgroup contacts as reflected in

the scoring of the outcome domain Meeting/Observing People remained positive, contributing to overall visit satisfaction. Moreover, it was only when the reported frequency of encounters with other parties rose above the figure of 15 (as it did in some 8.3% of respondents) that the proportion of those finding the frequency of encounters objectionable dramatically rose to some 80%. While this figure may represent a crude threshold, it was only in the exception that it was reached (80.1% of respondents reporting ten or fewer encounters) and the circumstances under which such frequencies arise would have to be examined prior to any decision to depart from the policy of unrestricted public access.

In the event that it does become necessary to limit use through restricting access, user preference is for limiting party size to a maximum of between four and six individuals; limiting the number of departures scheduled for any one day; and imposing such limits by means of entry permits issued through the mail and affording equal opportunity of access to all regardless of state of residence, experience, or party type. Support for these mechanisms was strong across all categories of users.

It is clear from the widespread support for a number of initiatives - banning of axes and saws, mandatory use of fuel stoves, rejection of development, adherence to 'pack it in / pack it out' philosophy - that, regardless of origin

or experience levels, participants have had exposure to and have an awareness of the sensitivity of the river environment and the requirements for its continued maintenance as a wilderness area. In concert with participants' belief in the necessity of relying on self-imposed codes of behavior for the preservation of the area, and the overwhelming view that a greater effort should be put towards the provision of necessary and appropriate information to users and would be users, the most productive and effective management efforts at controlling user behavior will likely arise out of efforts to provide information and advice prior to the start of rafting trips. In view of the long planning horizon of most participants and the general acceptance of a permit system based on advanced bookings, the opportunity arises for pre-engagement contact and education. This approach would also be compatible with the view that control measures should be exerted outside the park boundaries and the management presence within the park kept to an absolute minimum.

The linkage between the value placed on experience outcomes and expressed preferences for general management directions was weak and in some instances ran counter to expectations.

As was the case with those using the bushwalking areas, it was presumed that the processes of recreational decision making and choice of activities, settings, and subsequent outcomes would be focused on this specific engagement and

in spite of the low levels of prior direct knowledge and experience, it was further assumed that there would be fairly strong links between valued outcomes and expressed views on general management direction. Again it transpired that this was not the case. The amount of variation in participant views, as reflected in the generated indices, that was capable of explanation through variation in experience outcome scores was minor. Views on management and the value placed on the experience outcomes participants associated with the engagement were again relatively independent and at the level of aggregation adopted for the study give no clear indication of any strong and generally shared perception of the likely impact of management direction on the opportunities provided by rafting the Franklin - Lower Gordon Rivers beyond the very broadest of generalizations.

This result is indicative of either a low level of impact of the suggested management options on the experience opportunities presented by a rafting trip in the Franklin Lower Gordon Wild Rivers National Park, or a failure by present users to foresee the nature and extent of any such impact and to be thereby influenced in their views on the appropriateness of those management options as a result.

BIBLIOGRAPHY:

Aldskogius, H. (1977). A Conceptual Framework and a Swedish Case Study of Recreational Behavior and Environmental Cognition. Economic Geography 53:163-183.

Altman, I. (1975). The Environment and Social Behavior. Brooks-Cole Publishing. Monterey, California. 256 pp.

Angus, M. (1975). The World of Olegas Truchanas. OBM Pty. Ltd., Hobart, Tasmania. 144 pp.

Anon. (1965). Beauty Is Preserved. Hobart Mercury 21/6/65.

Anon. (1983). Australia's Name At Stake On Dam Issue. Hobart Mercury 12/2/83.

Atkinson, J.W. (1964). An Introduction to Motivation. Van Nostrand, Princeton, New Jersey. 335 pp.

Atkinson, J.W. & Birch, D. (1970). A Dynamic Theory of Action. John Wiley & Son, New York. 341 pp.

Bailey, S. (1983). No-Dam Demonstration Eye-Opener For Many. The Hobart Mercury 5/2/83.

Bardwell, S. (1973). Wilderness Use in South West Tasmania: A Pilot Study. Monograph No. 1. Combined Universities Recreation Research Group, Monash University, Melbourne. 72 pp.

Beaman, J. & Lindsay, S. (1975) Practical Applications of Cluster Analysis. Recreation Review 4(3):13-21.

Beaulieu, J.T. & Schreyer, R. (1984). Choices of Wilderness Environments - Differences Between Real and Hypothetical Choice Situations. pp. 38-45 in Proceedings of a Symposium on Recreation Choice Behavior. USDA Forest Service GTR INT-184.

Berry, D., Cox, C. & Wolff, P. (1983). Managing Rafting Rivers. Water Spectrum 15(1):10-17.

Birch, D. & Veroff, I. (1965). Motivation: The Study of Action. Brooks-Cole. Wadsworth, California.

Bowman, M. (1979). Australian Approaches to Environmental Management. Environmental Law Reform Group, Publication No.6. University of Tasmania, Hobart, Tasmania. 511 pp.

Brewer, D, & Gillespie, G.A. (1966). Ideas and Attitudes: Estimating Satisfaction Levels of Outdoor Recreationists. Journal of Soil and Water Conservation 22(6):248-249.

Brown, B. (1979). The Franklin and Lower Gordon Rivers: A Wilderness Pictorial. Tasmanian Wilderness Society, Hobart, Tasmania. 31 pp.

Brown, B. & Dombrovskis, P. (1983). Wild Rivers - Franklin, Denison, Gordon. Dombrovskis Pty. Ltd., Hobart, Tasmania. 128 pp.

Brown, M.J., Hoggins, D.D. & Bayly-Stark, H.J. (1977). Conservation of Flora in Tasmania. Wildlife Division Technical Report 77/4. National Parks and Wildlife Service, Hobart, Tasmania. 65 pp.

Brown, P.B. & Wilson, R.I. (1982). The Orange-bellied Parrot. pp. 106-116. in Proceedings of a Symposium on the Biology of Rare and Endangered Species in Australia. Australian Academy of Science, Canberra, ACT.

Brown, P.J. (1977a). White Water Rivers: Social Inputs to Carrying Capacity Based Decisions. pp. 92-121 in Managing Colorado River White Water: The Carrying Capacity Strategy. Institute for Outdoor Recreation and Tourism, Utah State University, Logan.

Brown, P.J. (1977b). Information Needs for River Recreation Planning and Management. pp 193-201 in Proceedings of a River Recreation Management and Research Symposium. USDA Forest Service GTR NC-28.

Brown, P.J. (1979). The Opportunity Spectrum: Techniques and Implications for Resource Planning and Co-ordination. pp. 82-87 in Dispersed Recreation and Natural Resource Management. College of Natural Resources, Utah State University, Logan.

Brown, P.J., Dyer, A. & Whaley, R.S. (1973). Recreation Research - So What? Journal of Leisure Research. 5:16-24.

Brown, P.J., Driver, B.L. & Berry, J.K. (1980). Use of the Recreation Opportunity Planning System to Inventory Recreation Opportunities of Arid Lands. in Proceedings of a Workshop on Arid Land Resource Inventories. USDA Forest Service.

Brown, P.J., Driver, B.L. and McConnell, C. (1978). The Opportunity Spectrum Concept and Behavioral Information in Outdoor Recreation Supply Inventories: Background and Application. pp. 73-84 in Integrated Inventories of Renewable Natural Resources. USDA Forest Service GTR RM-55.

Brown, P.J. & Haas, G.E. (1980). Wilderness Recreation Experiences: The Rawah Case. Journal of Leisure Research. 12:229-241.

Brown, P.J., Hautaluoma, J. & McPhail, S.M. (1977). Colorado

Deer Hunting Experiences. pp. 216-225 in Proceedings of the 42nd North American National Wildlife and Natural Resources Conference. Atlanta.

Buist, L.J. & Hoots, T.A. (1982). The Recreation Opportunity Spectrum Approach to Resource Planning. Journal of Forestry 80:84-86.

Burton, J.R., Williams, W.D., St. John, E. & Hill, D. (1974). The Flooding of Lake Pedder. Final Report of the Lake Pedder Committee of Enquiry, Department of the Environment and Conservation. Australian Government Publishing Service, Canberra, ACT. 317 pp.

Butler, G.D. (1959). Introduction to Community Recreation. McGraw Hill, New York. 612 pp.

Calais, S.S. (1981). Analysis of Visitor Impact on the Environments of Cradle Mountain and Lake St. Clair National Park and Implications for Recreational Management. Masters Thesis. University of Tasmania. Hobart, Tasmania. 300 pp.

Carlington, B. (1983). Tasmanian National Parks and Wildlife Service - Review of Visitor Information System. Tasmanian National Parks and Wildlife Service, Hobart, Tasmania. 24 pp. mimeo.

Cartland, Sir G.B., Foot, G.J. & Ogilvie, A.G. (1978). South West Advisory Committee Report to the Minister For National Parks and Wildlife. South West Advisory Committee, Hobart, Tasmania. 27 pp.

Catton, W.R. (1969). Motivations of Wilderness Users. Pulp and Paper Magazine of Canada, Dec. 1969 pp. 9-17.

Chenoweth, A. (1984). Assessment of Recreational Resources - North Stradbroke Island. pp. 203-222 in Proceedings of the 57th National Conference of the Royal Australian Institute of Parks and Recreation, Launceston.

Clark, R.N., Hendee, J.C., & Campbell, F.L. (1971). Values, Behaviors, and Conflict in Modern Camping Culture. Journal of Leisure Research. 3:143-159.

Clark, R.N., & Stankey, G.H. (1979). The Recreation Opportunity Spectrum: A Framework for Management Planning and Research. USDA Forest Service GTR PNW-98. 32 pp.

Clawson, M. & Knetsch, J.L. (1966). Economics of Outdoor Recreation. John Hopkins Press, Baltimore. 328 pp.

Connolly, B. (1983). The Fight for the Franklin. Cassell Ltd., North Ryde, New South Wales. 143 pp.

Davis, B.W. (1981). Characteristics and Influence of the

Australian Conservation Movement: An Examination of Selected Controversies. Doctoral Dissertation. University of Tasmania. Hobart, Tasmania. 533 pp.

Dillman, D. (1977). Mail and Telephone Surveys: The Total Design Method. John Wiley & Son, New York. 325 pp.

Driver, B.L. (1976a). Quantification of Outdoor Recreationists' Preferences. pp. 165-188 in Research, Camping and Environmental Education. Pennsylvania State University Serial No. II. College Park, Pennsylvania.

Driver, B.L. (1976b). Toward a Better Understanding of Outdoor Recreation Participation. USDA Forest Service GTR SE-9.

Driver, B.L. (1977). Item Pool: For Scales Designed to Quantify the Psychological Outcomes Desired and Expected from Recreation Participation. 31 pp. Mimeo.

Driver, B.L. & Brown, P.J. (1975). A Social-Psychological Definition of Recreation Demand With Implications for Recreation Resource Planning. pp. 64-88 in Assessing Demand for Outdoor Recreation. National Academy of Sciences. Washington, D.C.

Driver, B.L. & Brown, P.J. (1978). The pp unity Spectrum Concept and Behavioral Information in Outdoor Recreation Supply Inventories: A Rationale. pp 24-31 in Proceedings of an Integrated Renewable Resource Inventories Workshop. USDA Forest Service GTR-RM 55.

Driver, B.L. & Cooksey, R.W. (1977). Preferred Psychological Outcomes of Recreational Fishing. pp. 126-139 in Proceddings of a National Sport Fishing Symposium. Humboldt State University. Arcata, California.

Driver, B.L. & Knopf, R.C. (1976). Temporary Escape: One Product of Sport Fisheries Management. Fisheries 1(2):21-29.

Driver, B.L. & Knopf, R.C. (1977). Personality, Outdoor Recreation and Expected Consequences. Environment and Behavior 9(2):169-193.

Driver, B.L. & Tocher, S.R. (1970). Toward a Behavioral Interpretation of Recreation, with Implications for Planning. pp. 9-31 in Elements of Outdoor Recreation Planning. University of Michigan Press. Ann Arbour, Michigan.

Edwards, W. (1955). The Prediction of Decision Among Bets. Journal of Experimental Psychology 50:201-214.

Ellis, M.J. (1973). Why People Play. Prentice Hall,

Englewood Cliffs, New Jersey. 145 pp.

Evers, N.C.K., Bailey, K.R., Ingpen, R.R., Russell, J.R. & Carlington, B. (1984). South West Tasmania Tourism Study. Evers Consulting Services Pty. Ltd. Kettering, Tasmania. 141 pp.

Festinger, L. (1957). A Theory of Cognitive Dissonance. Stanford University Press. Stanford, California. 291 pp.

Fishbein, M. (1967). Attitude Theory and Measurement. John Wiley & Son, New York. 499 pp.

Foster, M.B. (1975). Summer Wilderness Use in Kosciusko National Park. Honours Thesis, Australian National University, Canberra, ACT. 176 pp.

Gee, H. (1978). The Franklin: Tasmania's Last Wild River. The Tasmanian Wilderness Society, Hobart, Tasmania. 28 pp.

Geist, V. (1978). A Philosophical Look at Recreational Impact on Wildlands. pp. 1-7 in Proceedings of a Symposium on Recreational Impacts on Wildlands. USDA Forest Service Publication No. R-6-001-1979.

Gold, S.M. (1980). Recreation Planning and Design. McGraw Hill Co., New York. 322 pp.

Haas, G.E. (1979). User Preferences for Recreation Experience Opportunities and Physical Resource Attributes in Three Colorado Wilderness Areas. Doctoral Dissertation. Colorado State University, Fort Collins. 140 pp.

Haas, G.E., Allen, D.J. & Manfredo, M.J. (1979). Some Dispersed Recreation Experiences and the Resource Settings in Which They Occur. in Proceedings of a Symposium on Assessing Amenity Resource Values. USDA Forest Service GTR RM-68.

Hancock, H.K. (1973). Recreation Preference: Its Relation to User Behavior. Journal of Forestry 71:336-337

Harris, C.C., Driver, B.L. & Bergersen, E.P. (1985). Do Choices of Sport Fisheries Reflect Angler Preferences? pp. 46-54 in Proceeedings of a Symposium on Recreation Choice Behavior. USDA Forest Service GTR INT-184.

Hautaluoma, J. & Brown, P.J. (1978). Attributes of the Deer Hunting Experience: A Cluster Analytic Study. Journal of Leisure Research 10:271-287.

Hawes, M. (1982). Above Me Only Sky. Drinkwater Pty Ltd., Hobart, Tasmania. 112 pp.

Hazellwood, B. (Director). (1983). Hawkins' River. 57 min.

video. TVT Channel 6 Hobart and Twentieth Century Fox.

Heberlein, T.A. (1977). Density, Crowding and Satisfaction: Sociological Studies for Determining Carrying Capacities. pp. 67-76 in Proceedings of a Symposium on River Recreation Management and Research. USDA Forest Service GTR NC-28.

Hecock, R.D. (1970). Recreation Behavior Patterns as Related to Site Characteristics of Beaches. Journal of Leisure Research 2:237-250.

Helman, P. (1979). Snowy River Study: A Recreation Evaluation for Wild and Scenic River Management. Victorian National Parks Service, Melbourne, Victoria. 48 pp.

Helman. P. (1980). Wild and Scenic Rivers. pp. 191-195 in The Value of National Parks: Proceedings of the Second National Wilderness Conference. Australian Conservation Foundation, Sydney, NSW.

Helman, P. (1981). Wild and Scenic Rivers: A Preliminary Study of New South Wales. New South Wales National Parks and Wildlife Service Occasional Paper No.2. NPWS, Sydney, NSW. 46 pp.

Hendee, J.C. (1974). A Multiple Satisfaction Approach to Game Management. Wildlife Society Bulletin 2(3):104-113.

Hendee, J.C., & Burdge, R.J. (1974). The Substitutability Concept: Implications for Recreation Research and Management. Journal of Leisure Research 6:157-162.

Hendee, J.C. & Harris, R.W. (1970). Foresters' Perceptions of Wilderness User Attitudes and Preferences. Journal of Forestry 68(12):759-762.

Heritage Conservation and Recreation Service (1979). The Third Nationwide Outdoor Recreation Plan - The Assessment. U.S. Department of the Interior, Washington, D.C. 264 pp.

High Court of Australia (1983). Commonwealth vs Tasmania. Australian Law Reports Vol. 46 No. 625.

High School Education Law Project (1979). Environment. National Curriculum Development Centre and the Law Foundation of New South Wales, Sydney, NSW. 68 pp.

Hope, R.M. (Chairman) (1974). Report of the Committee of Inquiry into the National Estate. Australian Government Publishing Service, Canberra, ACT. 415 pp.

Hydro Electric Commission (1979). Gordon River Power Development, Stage Two. Hydro Electric Commission of Tasmania, Hobart, Tasmania. 91 pp.

Jackson, P. (1986). Adapting the ROS Technique to the Urban Setting. Australian Parks and Recreation 22(3):26-28.

Jensen, L. (Director). (1983). Tasmania: The Last Wilderness. 48 min. 16 & 35 mm. Tasmanian Film Corporation, Hobart, Tasmania.

Kiernan, K., Jones, R. & Ranson, D. (1983). New Evidence from Fraser Cave for Glacial Age Man in South West Tasmania. Nature 301:28-31.

Kirkpatrick, J.B. (1979). Hydro Electric Development and Wilderness in Tasmania. Department of the Environment, Hobart, Tasmania. 30 pp.

Knopf, R.C., Driver, B.L., & Bassett, J.R. (1973). Motivations for Fishing. pp. 191-204 in Transactions of the 38th North American Wildlife and Natural Resources Conference. Wildlife Management Institute. Washington, D.C.

Knopf, R.C. & Lime, D.W. (1982). A Recreation Managers' Guide to Understanding River Use and Users. USDA Forest Service RP NC-240.

Knopf, R.C., Peterson, G. and Leatherberry, E. (1983). Motives for Recreational River Floating - Relative Consistency Across Settings. Leisure Sciences 5:231-255.

Knopp, T.B. (1972). Environmental Determinants of Recreation Behavior. Journal of Leisure Research 4:129-138.

Korman, A.K. (1974). The Psychology of Motivation. Prentice Hall. Englewood Cliffs, New Jersey. 291 pp.

Kraus, R. (1971). Recreation and Leisure in Modern Society. Prentice Hall. Englewood Cliffs, New Jersey. 493 pp.

Lake Pedder Action Committee (1972). Lake Pedder: Why a National Park Must Be Saved. Lake Pedder Action Committee and The Australian Union of Students, Camberwell, Victoria. 96 pp.

Lake Pedder Action Committee (1973). The Future of Lake Pedder. Lake Pedder Action Committee, Hobart, Tasmania. 70 pp.

Lake, P.S. (1978). Aquatic Ecosystems - Conflicting Interests and Conservation. Australian Society of Limnology Newsletter 11(3):20:32.

Lake, P.S. (1979). Patches of World Along Our Rivers. Habitat 7(6):14-18.

Lawler, E.E. & Suttle, J.L. (1972). A Causal Correlation Test of the Need Hierarchy Concept. Organizational Behavior and Human Performance 7:265-287.

Lee, R.G. (1977). Alone With Others: The Paradox of Privacy in the Wilderness. Leisure Sciences 1(1):3-19.

Levy, J. (1978). Play Behavior. John Wiley & Son, New York. 232 pp.

Lime, D.W. (1977). Research for River Recreation Planning and Management. pp. 202-210 in Proceedings of a Symposium on River Recreation Management and Research. USDA Forest Service GTR NC-28.

Lime , D.W. (1979). Managing Visitor Use on Whitewater Rivers. Trends 16(2):24-27.

Lucas, R.C. (1964). Wilderness Perception and Use: The Example of the Boundary Waters Canoe Area. Journal of Natural Resources 3:394-411.

Luce, R.D. & Raiffa, H. (1957). Games and Decisions: A Study of the Behavioral Models Project. John Wiley & Son, New York. 509 pp.

Luther, H. & Rzoska, J. (1971). Project Aqua: A Source Book of Inland Waters Proposed for Conservation. IBP Handbook No.21, IUCN Occasional Paper No.2. Blackwell Scientific Publications, Oxford. 238 pp.

Manfredo, M.J. & Brown, P.J. (1980). Use of Recreation Opportunity Planning to Inventory Arid Lands in Eastern Oregon - A Demonstration. in Proceedings of a Workshop on Arid Land Resource Inventories. USDA Forest Service.

Manfredo, M.J., Brown, P.J. & Haas, G.E. (1978). Fishermen Values in Wilderness. in Proceedings of the 1978 Annual Western Association of Fish and Wildlife Agencies Conference. San Diego, California.

Manfredo, M.J., Driver, B.L. & Brown, P.J. (1983) A Test of Concepts Inherent in Experience Based Setting Management for Outdoor Recreation Areas. Journal of Leisure Research 15(3):263-283.

Maslow, A.H. (1954). Motivation and Personality. Harper, New York. 411 pp.

McCool, S.F. (1980). In-Place Information Needs for Wildland Based Recreation Activity Planning. in Proceedings of a National Workshop on In-Place Resource Inventories: Principles and Practices. University of Maine. Orono, Maine.

McCool, S.F. & Utter, J. (1981). Preferences for Allocating River Recreation Use. Water Resources Bulletin 17(3):431-437.

McCool, S.F. & Utter, J. (1982). Recreation Use Lotteries: Outcomes and Preferences. Journal of Forestry 80:10-11

McDonald, C.D. & Hammitt, W.E. (1983). Managing River Environments for the Participation Motives of Stream Floaters. Journal of Environmental Management 69:369-377.

McHarg, I. (1971). Design With Nature. Doubleday & Co. Garden City, New Jersey. 197 pp.

McKennell, A.C. (1974). Surveying Attitude Structures: A Discussion of Principles and Procedures. Elsevier Press, Amsterdam. 94 pp.

McKenry, K. (1972). Pedder Papers: Anatomy of a Decision. Australian Conservation Foundation, Parkville, Victoria. 45 pp.

McKenry, K. (1975). Recreation, Wilderness and the Public. Department of Youth, Sport and Recreation. Melbourne. 214 pp.

McLeod, N. & Howes, J. (1983). Wilderness Tasmania: A World Heritage. Dorr-McLeod Publishing, Singapore. 34 pp.

McQueen, J. (1983). The Franklin: Not Just a River. Penguin, Ringwood, Victoria. 85 pp.

Mercer, D. (1971). The Role of Perception in the Recreation Experience: A Review and Discussion. Journal of Leisure Research 3:261-276.

Mercer, D. (ed) (1981). Outdoor Recreation - Australian Perspectives. Sorrett Publishing, Malvern, Victoria. 171 pp.

Millar, S. (1968). The Psychology of Play. Penguin, Baltimore. 288 pp.

Miller, G.A., Galanter, E. & Pribram, K.H. (1960). Plans and Structure of Behavior. Holt, Rinehart & Wilson, New York. 226 pp.

Millington, R.J., Jones, R., Brown, D. & Vernon, B. (1979). Huon Pine - Endangered? Centre for Environmental Studies Occasional Paper No.9. Board of Environmental Studies, University of Tasmania. Hobart, Tasmania. 123 pp.

Moeller, G.H. & Engelken, J.H. (1972). What Fishermen Look For in a Fishing Experience. Journal of Wildlife Management 36(4):1253-1257.

More, T.A. (1973). Attitudes of Massachusetts Hunters. pp. 72-76 in Human Dimensions in Wildlife Programs. People - Natural Resources Research Council. Seattle, Washington.

Mosley, J.G. (1970). The Challenge of Wilderness. Architecture in Australia Journal 59(4):563-578.

Mosley, J.G. (1983). A Green Election - Beginning of a New Era? Australian Conservation Foundation Newsletter 15(3):1,3.

Moss, W.T. & Lamphear, S.C. (1970). Substitutability of Recreational Activities in Meeting the Stated Needs and Drives of the Visitor. Journal of Environmental Education 1:129-131.

Moult, A. & Meier, L. (1983). Australia: The Beautiful Wilderness. Weldon and Associates, McMahons Pt., New South Wales. 286 pp.

Murrell, P. (1982). National Parks and Wildlife Service Report for the Year Ended 30 June 1981. Tasmanian National Parks and Wildlife Service, Hobart, Tasmania. 73 pp.

National Parks and Wildlife Service (1979). A Proposal for the Franklin - Lower Gordon Wild Rivers National Park. Tasmanian National Parks and Wildlife Service, Hobart, Tasmania. 51 pp.

Nicosia, F.M. (1966) Consumer Decision Processes. Prentice Hall, Englewood Cliffs, New Jersey. 381 pp.

Nie, N.H., Hull, C.H., Jenkins, J.G., Steinbrenner, K. & Bent, D.H. (1975). Statistical Package for the Social Sciences. McGraw Hill, New York. 675 pp.

O'Neill, M. (1983). Dams Vote a Warning to Government: Brown. The Melbourne Age 6/12/82.

Ovington, J.D. (1979) A National Perspective. pp. 45-55 in The Value of National Parks. Australian Conservation Foundation. Melbourne, Victoria.

Parsons, D.J., Stohlgren, T.J. & Fodor, P.A. (1981). Establishing Backcountry Use Quotas: An Example form Mineral King, California. Environmental Management 5:335-340.

Peat, Marwick, Mitchell & Co. & Evers, N.C.K. (1977). Southern Tasmania Tourism Development Plan. Urban Systems Corporation. Hobart, Tasmania. 221 pp.

Peterson, G.L. (1974). Evaluating the Quality of the Wilderness Environment: Congruence Between Perception and Aspiration. Environment and Behavior 6(2):169-193.

Porter, L.W. & Lawler, E.E. (1968). What Job Attitudes Tell About Motivation. Harvard Business Review 46(1):118-126.

Porter, L.W., Lawler, E.E. & Hackman, J.R. (1975). Behavior in Organizations. McGraw Hill, New York. 523 pp.

Potter, D.R., Hendee, J.C. & Clark, R.N. (1973). Hunting Satisfactions: Game, Guns or Nature? pp 67-71 in Human Dimensions in Wildlife Programs. People - Natural Resources Research Council. Seattle, Washington.

Rodney, L.S. & Toalson, R.F. (1981) Administration of Recreation, Parks, and Leisure. John Wiley & Son, New York. 486 pp.

Rosenthal, D.H. & Driver, B.L. (1983). Managers' Perceptions of Experiences Sought by Ski-Tourers. Journal of Forestry 81(2):88-90,105.

Ross, J.H. (1980). The Application of Location - Allocation Techniques to Parks System Planning. pp 111-124 in Proceedings of a Symposium on Applied Research for Parks and Recreation in the 1980s. British Columbia Ministry of Lands, Parks and Recreation, and Department of Geography, University of Victoria. Victoria, British Columbia.

Rossman, B.B. & Ulehla, E.J. (1971). Psychological Rewards Associated with Wilderness Use. Environment and Behavior 9:41-66.

Russell, J.A., Matthews, J.H. & Jones, R. (1979). Wilderness in Tasmania. Centre for Environmental Studies Occasional Paper No. 10. Board of Environmental Studies, University of Tasmania, Hobart, Tasmania. 103 pp.

Sanders, N. & Bell, C. (1980). A Time to Care: The Struggle for Tasmania's Wilderness. Chris Bell Pty Ltd., Blackmans Bay, Tasmania. 112 pp.

Sapora, A.V. & Mitchell, E.D. (1961). The Theory of Play and Recreation. Ronald Press, New York. 196 pp.

Sauer, C.L. & McDowell, K. (1974). Characteristics and Preferences of Snowmobilers and Cross Country Skiers in Roosevelt National Forest, Winter 1972-73. Report to the USDA Forest Service Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

Schomaker, J.H. & Leatherberry, E.C. (1983). A Test for Inequity in River Recreation Reservation Systems. Journal of Soil and Water Conservation 38(1):52-55.

Shafer, E.L. & Mietz, J. (1969). Aesthetic and Emotional Experiences Rate High with Northeast Wilderness Hikers.

Environment and Behavior 1(2):186-197.

Shontz, W., Williams, A., Johnson, L., Dorfman, P., Faulkner, L., McCulloch, J., & Willis, M. (1975). User Satisfaction as a Function of Recreation Management: A Model for Recreation Succession. Institute of Applied Research. MSU-NSF Gallatin Canyon Study Research Monograph No. 11. Montana State University, Bozeman. 44 pp.

Slatyer, R. (1983). South West Tasmania: What World Heritage Listing Means. Canberra Times 8/1/83.

Slavson, R. (1946). Recreation and the Total Personality. New York Association Press. New York.

South West Committee (1966). Submission Covering Conservation and Development of South West Tasmania: A Submission to the Premier of Tasmania. South West Committee, Hobart, Tasmania. 34 pp.

Southwell, L. (1983). The Mountains of Paradise: The Wilderness of Southwest Tasmania. Les Southwell Pty. Ltd., Camberwell, Victoria. 207 pp.

Stankey, G.H. (1973). Visitor Perception of Wilderness Carrying Capacity. USDA Forest Service RP INT-142. 61 pp.

Stankey, G.H. (1982). The Role of Management in Wilderness and Natural-Area Preservation. Environmental Conservation 9(2):149-155.

Stankey, G.H. & Baden, J. (1977). Rationing Wilderness Use: Methods, Problems and Guidelines. USDA Forest Service RP INT-192.

Stephens, D. (undated). A Pedder Pictorial. Mercury-Walch Pty. Ltd., Hobart, Tasmania. 18 pp.

Tasmanian Department of Tourism (1982). Tasmanian Visitor Profile - Compiled from the 1981 Survey of Visitors to Tasmania. Department of Tourism, Hobart, Tasmania. 33 pp.

Tasmanian Department of Tourism (1985). Tasmanian Visitor Survey 1984: Comparative Summary. Department of Tourism, Hobart, Tasmania. 35 pp.

Thomas, W.I. (1917). The Four Wishes. pp. 111-144 in Social Behavior and Personality (1951). Social Science Research Council, New York.

Thompson, P. (1981). Power In Tasmania. Australian Conservation Foundation. Hawthorn, Victoria. 191 pp.

Tindale, R. & Waud, P. (1983). The Franklin Blockade. Tasmanian Wilderness Society, Hobart, Tasmania. 124 pp.

Tolman, E,C. (1955). Principles of Performance. Psychological Review 62:315-326.

Wagar, J.A. (1964). The Carrying Capacity of Wildlands for Recreation. Forest Science Monograph No. 7. American Society of Foresters, Washington, D.C. 23 pp.

Wagar, J.A. (1966). Quality in Outdoor Recreation. Trends in Parks and Recreation 3(3):9-12.

Wagar, J.A. (1977). Wildland Recreation and Resource Management. pp 11-22 in Proceedings of the 1977 Wildland Recreation Conference. Alberta Department of Recreation Parks and Wildlife. Edmonton.

Waterman, P. (1978). Survey Results Tourist User Study of Strahan and Strathgordon, Summer - Autumn 1978. Discussion Paper No.16. South West Tasmania Resources Survey, Hobart, Tasmania. 51 pp.

Wellman, J.D. (1975). Human Response to Crowding: A Study of Fishing Behavior in a Vacation Environment. Doctoral Dissertation. School of Natural Resources, University of Michigan.

White, P.S. & Bratton, S.P. (1980). After Preservation: Philosophical and Practical Problems of Change. Biological Conservation 18:241-255.

White, R.W. (1959). Motivation Reconsidered: The Concept of Competence. Psychological Review 66(5):297-333.

Wiltshire, K. (1983). Why This Wilderness Is Vital. Brisbane Courier Mail 4/1/83.

Wishart, D. (1978). CLUSTAN User Manual. Inter-University Research Councils Series Report No. 47. Edinburgh University, Edinburgh. 80 pp.

APPENDICES

IX.1. Appendix One:

Stage One, Phase One: General Information Form
(distributed at park entry gates)

IX.2. Appendix Two:

Stage One, Phase One: Rafters' Form
(distributed at Collingwood Bridge)

IX.3. Appendix Three:

Stage One, Phase Two:
Views, Impressions, Experiences Form
(distributed as a B5 mail out booklet)

IX.4. Appendix Four:

Stage Two: Rafters' Form
(distributed as a B5 booklet at
Collingwood Bridge and as a mail out)

APPENDIX ONE

Location: _____ Date: _____

For Office Use Only

Please answer the following questions by placing a tick (√) in the appropriate box.

1. How many people are there in your group?
   ☐ One ☐ Two ☐ Three ☐ Four ☐ More than four

2. How long do you intend to stay in this park?
   ☐ ½ day or less ☐ One day ☐ Overnight ☐ Two or three days ☐ Longer

3. Is this the first time that you have visited this park? ☐ Yes ☐ No

4. What activities do you intend to participate in while visiting this park? *(Please tick all appropriate boxes)*

☐ Picnicking or BBQing	☐ Tent camping	☐ Backpacking
☐ Sightseeing	☐ Trailer camping	☐ Climbing
☐ Daywalking or less	☐ Caravaning	☐ Rafting
☐ Fishing	☐ Taking photographs	☐ Canoeing or boating

   ☐ Other (Please specify _____)

5. If you had to choose just <u>one</u> activity as the most important one for <u>you</u> on this visit, which one would it be? *(Please tick only one box)*

☐ Picnicking or BBQing	☐ Tent camping	☐ Backpacking
☐ Sightseeing	☐ Trailer camping	☐ Climbing
☐ Daywalking or less	☐ Caravaning	☐ Rafting
☐ Fishing	☐ Taking photographs	☐ Canoeing or boating

   ☐ Other (Please specify _____)

6. How many trips have you made in the past year, to this or other parks, in order to participate in the activities you ticked in question 4?
   ☐ None ☐ One ☐ Two ☐ Three ☐ Four ☐ More than four

Park use and user needs often vary with personal characteristics. The following questions will provide helpful information about users.

7. Where do you live? ☐ TAS. ☐ S.A. ☐ VIC. ☐ N.S.W. ☐ QLD. ☐ W.A.
   ☐ N.T. ☐ Overseas (Please specify _____)

8. In what age group are you?
   ☐ Under 19 ☐ 19 to 24 ☐ 25 to 29 ☐ 30 to 39
   ☐ 40 to 54 ☐ 55 to 64 ☐ 65 or older

9. What is your sex? ☐ Male ☐ Female

10. What best describes you? ☐ Single ☐ Married ☐ Other

11. What is the highest level of education that you have completed?
    ☐ Primary ☐ High School ☐ Matriculation ☐ Trade qualification
    ☐ University degree or C.A.E. diploma

When this visit is over and you have returned home, I would like to mail to you a few more easy questions about what you did on this visit and what you think about this park. If you would like to help me learn more about the users of Tasmania's parks and their needs, please fill in your name and address below.

NAME: _____

ADDRESS: _____

POST CODE: _____ *TELEPHONE NUMBER:* _____

When you have completed this form please return it to the National Parks and Wildlife Service office at the gate, or any other NPWS office. THANK YOU.

APPENDIX TWO

NATIONAL PARKS AND WILDLIFE SERVICE

FRANKLIN-LOWER GORDON WILD RIVERS NATIONAL PARK

WILD RIVERS USER SURVEY

Welcome to the Franklin River,

Following creation of the Wild Rivers National Park in May 1981, the National Parks and Wildlife Service of Tasmania is charged with responsibility for the care, control and management of this unique river system. It will greatly help us in that task if we have some idea what users expect and what concerns them about use and management of the area. Overseas experience indicates that there may prove to be a need for some form of control on the number of visitors using a great natural asset like the Franklin and while we are loath to impose a permit system it may be the only way to ensure those who follow you have an enjoyable experience and that the river environs are not irreversibly degraded. Your co-operation in answering the following questions will be of great assistance.

This questionnaire should be filled in by each person in your group.

Please return this form either to a crewmember of the "Denison Star", a National Parks and Wildlife Service Ranger or our Head Office at Magnet Court (PO Box 210), Sandy Bay, Tasmania. 7005.

Thank you.

John Burgess
PLANNING OFFICER
(NATURAL AREAS)

Greg Middleton
CHIEF RESOURCES
OFFICER

Peter Murrell
DIRECTOR

WILD RIVERS USER SURVEY

1. Age: ☐ 2. Sex: ☐

3. No. of people in your party: Female ☐ Male ☐

4. Where do you live? State ☐ Other Country ☐

5. Is this a commercially organised trip? Yes / No

6. If this is a private trip, where did you obtain information to help in your planning? .....

.....

7. Have you previously participated in similar trips on the Gordon-Franklin system?

Elsewhere in Tasmania? ☐ Elsewhere in Australia? ☐

Overseas? ☐

8. Where did you join the river on this trip? .....

9. How many days were you:

a. actually rafting/canoeing ☐

b. camping/resting ☐

c. walking ☐

d. other (specify) ..... ☐

10. Did you engage in other activities:

climb Frenchmans Cap ☐ caving ☐ fishing ☐

other (specify) .....

11. Did you have to portage at:

Thunderush ☐ Coruscades ☐ Cauldron ☐

The Churn ☐

12. Where and how did you leave the river? .....

.....

13. What type of craft did you use?

Rubber dinghy (one occupant) ☐ Airbed ☐ Canoe ☐

Other (specify) .....

14. Do you think there were too many in your party? Yes / No

15. What do you think is the ideal pary size? ☐

16. In determining this number please rank the following factors (1 to 3 or 4) in their order of importance to you:

    * personal enjoyment/wilderness experience ☐
    * practical aspects (campsite sizes, time taken portaging) ☐
    * safety aspects ☐
    * other (specify) ..... ☐

17. How many other parties did you encounter during your trip? ☐

18. Did this add or detract from your enjoyment of the trip?

    Add / No effect / Detract

19. How many nights did you share a campsite with other parties? ☐

20. What was the largest number camped at one site during your trip? ☐

    What site .....

21. Do you feel you were adequately prepared in relation to:

    * your craft Yes / No
    * your equipment Yes / No
    * your clothing Yes / No
    * your food Yes / No
    * knowledge of conditions Yes / No

22. On how many nights did you:

    * light a fire ☐
    * use a fuel stove ☐

23. If you believe you were in any way inadequately prepared (a) please outline what was unsatisfactory

    .....

    .....

    and (b) how do you think other parties might be helped to avoid this?

    .....

24. The U.S. National Parks Service has set a maximum annual number of "user days" for the Colorado River through Grand Canyon National Park. Do you think a limit of this type should be set for the Franklin and enforced through a system of permits and bookings?

    Yes / No

25. If no, can you su-gest any other way the National Parks and Wildlife Service might seek to protect the river from overuse and maintain the quality of users' experience?

    .....

    .....

    .....

26. Do you think commercial operators should be permitted to run trips on the Franklin River or its tributaries?

Yes / No

27. If yes, should they be allotted a certain percentage of the available user days? (circle)

5% 10% 25% 50% 75%

28. Were you distrubed by any developments or use which you encountered on the river? Please specify:
.....

.....

29. Date trip ended .....

30. If you would be willing to provide further information concerning your attitudes and opinions please provide your name and address in the space below. A further questionnaire will be posted to you.

NAME:..
.....

ADDRESS:
.....

Please feel free to attach any other comments or advice you believe might help the Service to better manage the river and environs.

Thank you for your assistance.

APPENDIX THREE

For Office Use Only

PART I

WITH THIS BOOKLET YOU WILL FIND A MAP OF THE PARK YOU WERE VISITING WHEN YOU FILLED IN OUR QUESTION SHEET WITH YOUR NAME AND ADDRESS. ON THIS MAP, PLEASE MARK WITH A CROSS (X) THE AREA OR AREAS IN THE PARK WHERE YOU PARTICIPATED IN THE MAIN ACTIVITY OF YOUR VISIT. FOR EXAMPLE: IF EITHER DAYWALKING OR BACKPACKING WAS YOUR MAIN ACTIVITY, PLEASE MARK THE TRAILS THAT YOU FOLLOWED; IF CAMPING WAS YOUR MAIN ACTIVITY, MARK THE AREA OR AREAS WHERE YOU CAMPED; IF IT WAS PICNICKING, PUT A CROSS (X) WHERE YOU HAD YOUR PICNIC. IN ORDER TO HELP YOU REMEMBER, WE HAVE ALSO SENT ALONG A COPY OF THE FIRST QUESTION SHEET YOU COMPLETED.

PART II

IN THE FOLLOWING SECTION PLEASE PLACE A TICK (✓) IN THE BOX NEXT TO THE PHRASE THAT BEST DESCRIBES THE CONDITIONS THAT YOU FOUND IN THAT PART OF THE PARK WHERE YOU PARTICIPATED IN THE MAIN ACTIVITY OF YOUR VISIT. FOR EXAMPLE: IF YOU WENT DAYWALKING, TRY TO RECALL THE CONDITIONS ALONG THE WALKING TRACKS; IF YOUR MAIN ACTIVITY WAS CAMPING, TRY TO RECALL THE CONDITIONS AROUND THE CAMPSITES.

1. Getting from the park gate to the area where you spent most of your visit was:

- ☐ Very easy
- ☐ Moderately easy
- ☐ Neither easy nor difficult
- ☐ Moderately difficult
- ☐ Very difficult

2. The tracks, trails and points of interest were:

- ☐ Very well marked
- ☐ Fairly well marked
- ☐ Un-marked
- ☐ Poorly marked
- ☐ Very poorly marked

3. Your general impression of the area where you spent most of your visit was that it was:

- ☐ In very good condition
- ☐ In fair condition
- ☐ In poor condition
- ☐ In very poor condition

4. Visitor use can lead to changes in the appearance of natural areas. The presence of facilities or services can also affect how an area looks. The area where you spent most of your visit looked:

- ☐ Completely natural
- ☐ Fairly natural
- ☐ Not very natural
- ☐ Not natural at all

5. For visitors like yourself, there were:

- ☐ Too many comforts and conveniences
- ☐ The right number of comforts and conveniences
- ☐ Too few comforts and conveniences
- ☐ Comforts and conveniences that are essential were missing

6. In the area where you spent most of your visit to this park, you encountered other visitors:

- ☐ Very frequently
- ☐ Frequently
- ☐ Occassionally
- ☐ Rarely
- ☐ Very rarely
- ☐ Not at all

Please turn the page and continue

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7. How many people did you see, outside of your own group, while in the area where you spent most of your visit?

☐ More than 100 ☐ Between 25 and 50
☐ Between 50 and 100 ☐ Between 10 and 25
☐ Fewer than 10 ☐

8. Were there too many people in the area?

☐ Yes ☐ No ☐

9. How would you rate the area to a friend who was thinking of visiting the park?

☐ Excellent ☐ Poor
☐ Very good ☐ Very poor
☐ Good ☐ Terrible
☐ Average ☐

PART III

IN THE FOLLOWING SECTION PLEASE PLACE A TICK (✓) IN THE BOX NEXT TO THE PHRASE THAT BEST DESCRIBES THE CONDITIONS THAT YOU FEEL WOULD BE MOST APPROPRIATE FOR THE AREA WHERE YOU PARTICIPATED IN THE MAIN ACTIVITY OF YOUR VISIT.

1. Roads leading from the park gate to such areas should be:

☐ Two lane sealed roads ☐ Suitable for 4WD vehicles only
☐ Gravel or dirt roads ☐ There should be no roads ☐

2. Allowable forms of travel within such areas should include:

☐ All types of motorized vehicles ☐ Only non-motorized travel
☐ Only 4WD vehicles ☐ Only walking ☐

3. Vehicle travel, if any, within such areas as the one where you spent most of your visit, should be permitted:

☐ Only on established formal roads ☐ On formal roads and bush tracks
☐ On formal roads, bush tracks and cross-country ☐

4. Walking tracks within such areas should be:

☐ Sign-posted and gravelled or sealed ☐ Sign-posted only
☐ Sign-posted and gravelled or duck-boarded only where necessary ☐ Marked only by regular cairns
☐ Un-marked ☐

5. Modifications to such areas to allow for increased recreational use should be:

☐ Very extensive and distributed throughout the area
☐ Moderately extensive and distributed throughout most of the area
☐ Undertaken in only a few locations
☐ No modifications should be made ☐

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6. Any modifications to such areas to support increased visitor use should be:

- ☐ Built with whatever materials and designs that do the job best
- ☐ Built as economically as possible
- ☐ Built only with materials that produce a natural appearance
- ☐ No modifications should be made to such areas ☐

7. Areas such as the one where you spent most of your visit should have:

- ☐ Many comforts and conveniences
- ☐ Some comforts and conveniences
- ☐ Minimum comforts and conveniences
- ☐ Only those facilities necessary for safety and site protection
- ☐ No facilities ☐

8. To fully enjoy such areas, visitors should encounter other visitors:

- ☐ Very frequently
- ☐ Frequently
- ☐ Occassionally
- ☐ Rarely
- ☐ Very rarely
- ☐ Not at all ☐

9. The amount of change caused by people that could occur to this area without reducing your enjoyment would be:

- ☐ Considerable
- ☐ Only moderate
- ☐ Very little
- ☐ None at all ☐

10. The <u>best</u> way of preventing excessive visitor impacts to such areas is:

- ☐ Limiting the number of users allowed into an area at any one time
- ☐ Limiting the length of time that any one visitor can stay
- ☐ Closing off areas that are being damaged because of over use
- ☐ Putting down gravel or duck-boards on trails and campsites ☐

11. Rules and regulations governing where users can walk, camp or light fires should be:

- ☐ Strict and fully enforced
- ☐ Moderate
- ☐ Minimal
- ☐ It should be left up to users' common sense ☐

12. What, if anything, would you like to see done to improve the opportunities for recreation within the area of the park where you spent most of your visit? visit?

_____

_____

_____

_____

_____

_____

Please turn the page and continue

THIS FINAL SECTION CONSISTS OF A LIST OF SCALES USED TO ASSESS THE PREFERENCES OF INDIVIDUALS FOR VARIOUS ATTRIBUTES OFTEN ASSOCIATED WITH OUTDOOR RECREATION EXPERIENCES. PLEASE INDICATE WITH A TICK (√) HOW EACH ITEM ADDED TO, OR DETRACTED FROM, YOUR SATISFACTION WITH YOUR VISIT. IF YOU FEEL THAT ANY GIVEN ITEM IS NOT RELEVANT TO WHAT YOU EXPERIENCED, PLEASE INDICATE THAT BY PLACING A TICK IN THE CENTRAL COLUMN " NEITHER ADDED TO, NOR DETRACTED FROM".

	VERY STRONGLY ADDED TO				NEITHER ADDED TO, NOR DETRACTED FROM				VERY STRONGLY DETRACTED FROM
Being free of society's restrictions...	( )	( )	( )	( )	( )	( )	( )	( )	( )
Learning about yourself & who you are..	( )	( )	( )	( )	( )	( )	( )	( )	( )
Accomplishing something.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Sharing your knowledge with others.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with other members of your group.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling a bit frightened.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Finding solitude.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being close to nature.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Doing things with your companions.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Thinking about the future.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Discovering something new and different	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being your own boss.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing peace and tranquility.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being away from the noise back home....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Taking a few risks.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Giving your mind a rest.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing the sights and sounds of nature.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Learning about the outdoors.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Finding out what your capabilities are.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting some exercise.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Reflecting on spiritual or higher values.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling in charge of what's happening..	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting away from civilization.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Using your outdoor skills.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Avoiding the unknown.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Facing a challenge.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with people who have similar interests.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Chancing a dangerous situation.....	( )	( )	( )	( )	( )	( )	( )	( )	( )

	VERY STRONGLY ADDED TO				NEITHER ADDED TO, NOR DETRACTED FROM				VERY STRONGLY DETRACTED FROM
Enjoying the acenery	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling obligated to no one	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting away from the demands of others	( )	( )	( )	( )	( )	( )	( )	( )	( )
Teaching your outdoor skills to others.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Thinking about your personal values	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having an experience to look back on	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being together with a family member(s).	( )	( )	( )	( )	( )	( )	( )	( )	( )
Doing something with the family	( )	( )	( )	( )	( )	( )	( )	( )	( )
Not being sure where you were	( )	( )	( )	( )	( )	( )	( )	( )	( )
Keeping fit and in shape	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being in a predictable situation	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having others nearby who could help if they were needed	( )	( )	( )	( )	( )	( )	( )	( )	( )
Escaping the family for awhile	( )	( )	( )	( )	( )	( )	( )	( )	( )
Taking it easy physically	( )	( )	( )	( )	( )	( )	( )	( )	( )
Comparing your equipment with that of others	( )	( )	( )	( )	( )	( )	( )	( )	( )
Seeing some new faces	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having the whole family share in an experience	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling good after being active	( )	( )	( )	( )	( )	( )	( )	( )	( )
Developing your skills and abilities	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a change from everyday routine	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being stimulated and excited	( )	( )	( )	( )	( )	( )	( )	( )	( )
Gaining a new perspective or outlook	( )	( )	( )	( )	( )	( )	( )	( )	( )
Showing others what you can do	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a chance to use your equipment	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with your friends	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a chance to meet new people	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting rid of tension and anxiety	( )	( )	( )	( )	( )	( )	( )	( )	( )
Gaining inspiration	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing the unknown	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being in a natural setting	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having new experiences	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being alone	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling isolated	( )	( )	( )	( )	( )	( )	( )	( )	( )

APPENDIX FOUR

THIS SECTION OF THE SURVEY IS CONCERNED WITH LEARNING SOMETHING ABOUT THE BACKGROUND TO YOUR VISIT TO THE FRANKLIN RIVER. PLEASE COMPLETE THIS SECTION BY PLACING A TICK (✓) NEXT TO THE RESPONSE THAT BEST ANSWERS EACH QUESTION.

For Office Use Only

1. WHERE DID YOU GET YOUR INFORMATION ABOUT THE FRANKLIN RIVER ?

   ( ) friends ( ) Wilderness Society ( ) tourist bureau

   ( ) NPWS ( ) Notes for Rafters ( ) Books and/or magazines

   ( ) ACF ( ) Environment Centre ( ) other (where.....

   .....)

2. HAVE YOU EVER BEEN DOWN THE FRANKLIN BEFORE ?

   ( ) yes ( ) no

3. HOW WOULD YOU DESCRIBE YOURSELF ?

   ( ) Beginner: Paddling experience previously limited to no more than short, flat water excursions.

   ( ) Novice: You have a basic understanding of white water strokes in a kayak or canoe and can read water and run easy rapids with confidence.

   ( ) Intermediate: Considerable river running experience and can negotiate rapids requiring complex sequential manoeuvering in up to Class IV water (International White Water Rating System).

   ( ) Advanced: Experienced and competent in handling heavy water and complex rapids with a sound understanding of white water hydraulics.

   ( ) Expert: Rare paddler with extensive experience and great competence in handling very heavy water in very complex rapids. Has wide experience and good judgement for leading trips down difficult rivers.

4. HOW WOULD YOU DESCRIBE THE OTHERS IN YOUR GROUP ?

   ( ) Less experienced than you (HOW MANY.....)

   ( ) In the same category as you (HOW MANY.....)

   ( ) More experienced than you (HOW MANY.....)

5. IN WHAT AGE GROUP ARE YOU ?

   ( ) less than 19 ( ) 19 to 24 ( ) 25 to 29 ( ) 30 to 39

   ( ) 40 to 54 ( ) 55 to 64 ( ) 65 years of age or older

6. WHAT SEX ARE YOU ?

   ( ) male ( ) female

7. WHAT IS YOUR HOME STATE ?

   ( ) Tas. ( ) S.A. ( ) N.S.W. ( ) Vic. ( ) Qld.

   ( ) W.A. ( ) N.T. ( ) A.C.T. ( ) Overseas (.....)

8. WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED ?

   ( ) primary ( ) highschool ( ) matriculation

   ( ) trade ( ) university or C.A.E.

THIS SECTION IS CONCERNED WITH THE DETAILS OF YOUR TRIP. MOST OF THE QUESTIONS CAN BE ANSWERED BY PLACING A TICK (✓) IN THE APPROPRIATE BOX. SOME QUESTIONS, HOWEVER, REQUIRE THAT YOU WRITE IN A NUMBER. PLEASE DO SO IN THE SPACE PROVIDED.

Office Use Only

1. ON WHAT DATE DID YOU...

   start your trip down the Franklin ? ___/___/___

   finish your trip down the Franklin ? ___/___/___

2. WHERE DID YOU JOIN THE RIVER ?

   ( ) Collingwood Bridge ( ) Franklin - Collingwood Jct.

   ( ) McCalls Crossing ( ) Jane and Erebus Track

   ( ) Fincham Track ( ) Other (where.....

   .....)

3. WHAT WAS THE COMPOSITION OF YOUR PARTY ?

   how many... ( ) males ( ) females

4. WHAT SORT OF TRIP WAS THIS ?

   ( ) privately organized ( ) commercially organized

   ( ) organized by a club or society (canoe club, naturalist society etc)

5. WHAT TYPE OF CRAFT WERE YOU USING ?

   ( ) canadian canoe ( ) airbed or lilo

   ( ) one-man kayak ( ) two-man kayak

   ( ) one-man rubber raft ( ) two-man rubber raft

   ( ) larger than two-man raft ( ) other (what.....)

6. ON HOW MANY NIGHTS DID YOU...

   use a stove ? ( )

   light a fire ? ( )

7. HOW MANY DAYS DID YOU SPEND...

   rafting /canoeing ? ( ) camping /resting ? ( )

   walking ? ( ) making repairs ? ( )

   waiting for water level to drop ? ( )

   other ? ( ) (what.....)

8. DID YOU PARTICIPATE IN ANY OF THE FOLLOWING ACTIVITIES ?

   ( ) climbing ( ) caving ( ) fishing

   ( ) photography ( ) exploring ( ) nature study

   ( ) canyoning ( ) other (what.....)

9. DID YOU PORTAGE AT ANY OF THE FOLLOWING POINTS ?

   The Churn - ( ) not at all ( ) partly ( ) entirely

   Coruscades - ( ) not at all ( ) partly ( ) entirely

   Thunder Rush - ( ) not at all ( ) partly ( ) entirely

   The Cauldron - ( ) not at all ( ) partly ( ) entirely

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10. HOW MANY NIGHTS DID YOU SHARE A CAMPSITE WITH PERSONS OUTSIDE OF YOUR OWN PARTY ?

    number of nights... ( )

11. WHAT WAS THE LARGEST NUMBER OF PEOPLE (OUTSIDE OF YOUR OWN PARTY) THAT YOU SHARED A CAMPSITE WITH ?

    number of people... ( )

12. AT WHICH SITE WAS THIS ?

( ) Masterpiece	( ) Bend of the Martin	( ) Deliverance Reach
( ) Ireneabyss	( ) C'wood-Franklin Jct.	( ) Lower Gordon
( ) Marble Cliffs	( ) Brook of Invenaestra	( ) Serenity Sound
( ) Mousehole	( ) Above the Gt. Ravine	( ) Verandah Cliffs
( ) Thunder Rush	( ) Fincham Hut	( ) Pig Trough
( ) Eagle Creek	( ) Loddon River	( ) Newlands Cascades
( ) Gordon Camp	( ) Below Bushrock Falls	( ) Rock Island Bend
( ) Coruscades	( ) Rafters Basin	( ) Below Gt. Ravine
( ) Cauldron	( ) Nasty Notch	( ) Calder's Ferry
( ) C'wood Bridge	( ) Ganymedes Pool	( ) Frenchman's Cap

13. WHILE YOU WERE ON THE RIVER, APPROXIMATELY HOW MANY OTHER PARTIES DID YOU ENCOUNTER ?

( ) none	( ) 1 to 5	( ) 6 to 10
( ) 11 to 15	( ) more than 15 parties	

14. WHERE DID YOU LEAVE THE RIVER ?

( ) Butler Island	( ) Marble Cliffs	( ) Eagle Creek
( ) Mt. McCall	( ) Fincham Track	( ) other (where....

.....)

15. HOW DID YOU LEAVE THE RIVER ?

    ( ) Denison Star ( ) other (how.....)

16. IF YOU ARE AN INTER-STATE OR OVERSEAS VISITOR, APPROXIMATELY HOW MUCH DO YOU THINK YOU HAVE SPENT OR ARE LIKELY TO SPEND ON THIS TRIP TO TASMANIA ?

    approximate amount... ($)

17. IF YOU ARE AN INTER-STATE OR OVERSEAS VISITOR, APPROXIMATELY HOW LONG DO YOU INTEND TO STAY IN TASMANIA ON THIS TRIP ?

    approximate length of stay... ( ) days

18. IF YOU ARE AN INTER-STATE OR OVERSEAS VISITOR, WHAT OTHER PLACES IN TASMANIA HAVE YOU VISITED, OR INTEND TO VISIT, ON THIS TRIP ?

.....

.....

.....

.....

IN THIS SECTION WE WOULD LIKE TO LEARN SOMETHING OF YOUR IMPRESSIONS OF YOUR TRIP DOWN THE FRANKLIN AND YOUR OPINIONS ABOUT A NUMBER OF POSSIBLE MANAGEMENT OPTIONS THAT MAY AFFECT FUTURE RECREATIONISTS. PLEASE INDICATE YOUR OPINION BY PLACING A TICK (✓) IN THE APPROPRIATE SPACE.

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1. ACCESS TO THE FRANKLIN SHOULD BE...

   ( ) improved so that it is easier to make the trip

   ( ) left the way it is

2. DO YOU THINK THAT YOU WERE ADEQUATELY PREPARED FOR YOUR TRIP IN RELATION TO... *(✓ if yes)*

   ( ) your craft ( ) your equipment ( ) food

   ( ) clothing ( ) experience ( ) expectations

   ( ) information about conditions

3. WHAT DID YOU THINK OF YOUR TRIP ?

   ( ) far exceeded your expectations

   ( ) well satisfied with your trip

   ( ) trip was alright

   ( ) generally dissatisfied/disappointed

   ( ) trip was terrible/miserable (why.....

   .....

   .....)

4. DO YOU THINK THAT YOU WILL RETURN AND DO IT AGAIN ?

   ( ) yes ( ) no ( ) don't know

5. WHAT DO YOU THINK THE PARTY SIZE FOR A TRIP ON THE FRANKLIN SHOULD BE ?

   maximum size ( ) persons

   minimum size ( ) persons

   ideal size ( ) persons

6. HOW DO YOU FEEL ABOUT THE NUMBERS OF PEOPLE / CRAFT THAT YOU SAW ON THE RIVER ?

	PEOPLE	CRAFT
far too many	( )	( )
somewhat too many	( )	( )
appropriate number	( )	( )
could have been more	( )	( )
too few	( )	( )
no opinion	( )	( )

7. IF YOU SAW OTHER GROUPS, TICK THE STATEMENT THAT MOST ACCURATELY REFLECTS YOUR VIEWS ABOUT THEM.

   ( ) Neither their numbers nor their behavior were disturbing

   ( ) Their behavior was disturbing

   ( ) The numbers were more disturbing than their behavior

   ( ) Both their numbers and behavior were disturbing

8. IF YOU WERE DISTURBED BY SOME ELEMENT OF YOUR TRIP, WHAT WAS IT ?

.....

.....

For Office Use Only

9. IF THE NUMBER OF USERS HAD TO BE LIMITED, THERE ARE SEVERAL WAYS IN WHICH THIS MIGHT BE DONE. PLEASE RANK THE FOLLOWING POSSIBILITIES ACCORDING TO HOW WELL OR POORLY YOU THINK THEY WOULD SERVE TO PROPERLY MANAGE THE NUMBER OF VISITORS ON THE RIVER BY PLACING A TICK IN THE APPROPRIATE BOX.

	STRONGLY AGREE ←			NO OPINION			→ STRONGLY DISAGREE	
lottery - a yearly drawing for a limited number of permits...	( )	( )	( )	( )	( )	( )	( )	( )
merit - only skilled paddlers or guided parties permitted...	( )	( )	( )	( )	( )	( )	( )	( )
advanced reservations - limit on total number, issued by mail.....	( )	( )	( )	( )	( )	( )	( )	( )
first come, first served - only limit being on the number of departures allowed on any one day.....	( )	( )	( )	( )	( )	( )	( )	( )
priority to first time visitors in the issue of any permits...	( )	( )	( )	( )	( )	( )	( )	( )
priority to local residents in the issue of any permits.....	( )	( )	( )	( )	( )	( )	( )	( )
priority to commercial tours with qualified guides.....	( )	( )	( )	( )	( )	( )	( )	( )
priority to private individuals regardless of experience or home State.....	( )	( )	( )	( )	( )	( )	( )	( )
priority to clubs and societies such as canoe or naturalist groups.....	( )	( )	( )	( )	( )	( )	( )	( )

10. DUE TO HEAVY USE THE CONDITION OF CAMPSITES ALONG THE RIVER MAY DETERIORATE. THE USE OF CAMPSITES MAY BE MANAGED IN A NUMBER OF DIFFERENT WAYS. PLEASE INDICATE HOW YOU FEEL ABOUT EACH POSSIBILITY BY PLACING A TICK IN THE APPROPRIATE BOX.

	STRONGLY AGREE ←			NO OPINION			→ STRONGLY DISAGREE	
restrict camping to designated sites only.....	( )	( )	( )	( )	( )	( )	( )	( )
no fires allowed - stoves only..	( )	( )	( )	( )	( )	( )	( )	( )
toilet pits necessary - facilities needed.....	( )	( )	( )	( )	( )	( )	( )	( )
fires are an integral part of experience - firepits needed..	( )	( )	( )	( )	( )	( )	( )	( )
fires necessary for drying gear rely on users' judgement.....	( )	( )	( )	( )	( )	( )	( )	( )
garbage pits needed to control litter - set up dumps.....	( )	( )	( )	( )	( )	( )	( )	( )
garbage pits should not be set up - "pack it in, pack it out"	( )	( )	( )	( )	( )	( )	( )	( )
build up campsites to withstand heavier use.....	( )	( )	( )	( )	( )	( )	( )	( )

11. IN A SURVEY OF RAFTERS CONDUCTED LAST YEAR, A NUMBER OF SUGGESTIONS WERE MADE REGARDING ACTIONS THAT MIGHT BE TAKEN TO CONTROL USE, INSURE THE PROTECTION OF THE RIVER, PROMOTE SAFETY, AND ENHANCE ENJOYMENT. IT IS NOT POSSIBLE TO ADOPT ALL OF THE SUGGESTIONS MADE. PLEASE INDICATE HOW YOU FEEL ABOUT EACH OF THE FOLLOWING ITEMS.

For Office Use Only

	STRONGLY AGREE ←			NO OPINION			→ STRONGLY DISAGREE	
ranger station at C'wood Bridge.	( )	( )	( )	( )	( )	( )	( )	( )
producing detailed maps.....	( )	( )	( )	( )	( )	( )	( )	( )
building huts at several points.	( )	( )	( )	( )	( )	( )	( )	( )
re-inforcing all portages.....	( )	( )	( )	( )	( )	( )	( )	( )
banning all axes and saws.....	( )	( )	( )	( )	( )	( )	( )	( )
producing safety check lists....	( )	( )	( )	( )	( )	( )	( )	( )
require formal registration of all visitors.....	( )	( )	( )	( )	( )	( )	( )	( )
promote the use of wetsuits.....	( )	( )	( )	( )	( )	( )	( )	( )
have safety inspections.....	( )	( )	( )	( )	( )	( )	( )	( )
require one experienced member per party.....	( )	( )	( )	( )	( )	( )	( )	( )
limit party size.....	( )	( )	( )	( )	( )	( )	( )	( )
space out departures.....	( )	( )	( )	( )	( )	( )	( )	( )
limit # of departures per day...	( )	( )	( )	( )	( )	( )	( )	( )
limit # of departures per year..	( )	( )	( )	( )	( )	( )	( )	( )
preventing departures when water level is too high.....	( )	( )	( )	( )	( )	( )	( )	( )
limiting raft size.....	( )	( )	( )	( )	( )	( )	( )	( )
enforcing a permit system.....	( )	( )	( )	( )	( )	( )	( )	( )
producing information booklets..	( )	( )	( )	( )	( )	( )	( )	( )
require rafters to carry stoves.	( )	( )	( )	( )	( )	( )	( )	( )
emphasize the risk involved.....	( )	( )	( )	( )	( )	( )	( )	( )
institute a users' fee.....	( )	( )	( )	( )	( )	( )	( )	( )
publish suggested food and equipment lists.....	( )	( )	( )	( )	( )	( )	( )	( )
refuse permits to ill-prepared or ill-equipped parties.....	( )	( )	( )	( )	( )	( )	( )	( )
provide detailed information of water levels.....	( )	( )	( )	( )	( )	( )	( )	( )

PLEASE USE THE SPACE BELOW TO ADD ANY SUGGESTIONS THAT YOU MIGHT HAVE WITH REGARD TO POSSIBLE MANAGEMENT OPTIONS THAT MIGHT IMPROVE THE MANAGEMENT OF THE FRANKLIN.

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THIS FINAL SECTION CONSISTS OF A LIST OF SCALES USED TO ASSESS THE PREFERENCES OF INDIVIDUALS FOR VARIOUS ATTRIBUTES OFTEN ASSOCIATED WITH OUTDOOR RECREATION EXPERIENCES. PLEASE INDICATE WITH A TICK (√) HOW EACH ITEM ADDED TO, OR DETRACTED FROM, YOUR SATISFACTION WITH YOUR TRIP DOWN THE FRANKLIN. IF YOU FEEL THAT ANY GIVEN ITEM IS NOT RELEVANT TO WHAT YOU EXPERIENCED, PLEASE INDICATE THAT BY PLACING A TICK IN THE CENTRAL COLUMN "NEITHER ADDED TO, NOR DETRACTED FROM."

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	VERY STRONGLY ADDED TO				NEITHER ADDED TO, NOR DETRACTED FROM				VERY STRONGLY DETRACTED FROM
Being free of society's restrictions...	( )	( )	( )	( )	( )	( )	( )	( )	( )
Learning about yourself & who you are..	( )	( )	( )	( )	( )	( )	( )	( )	( )
Accomplishing something.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Sharing your knowledge with others.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with other members of your group.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling a bit frightened.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Finding solitude.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being close to nature.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Doing things with your companions.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Thinking about the future.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Discovering something new & different..	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being your own boss.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing peace and tranquility.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being away from the noise back home....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Taking a few risks.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Giving your mind a rest.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing the sights and sounds of nature.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Learning about the outdoors.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Finding out what your capabilities are.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting some exercise.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Reflecting on spiritual or higher values.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling in charge of what's happening..	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting away from civilization.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Using your outdoor skills.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Avoiding the unknown.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Facing a challenge.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with people who have similar interests.....	( )	( )	( )	( )	( )	( )	( )	( )	( )
Chancing a dangerous situation.....	( )	( )	( )	( )	( )	( )	( )	( )	( )

	VERY STRONGLY ADDED TO				NEITHER ADDED TO, NOR DETRACTED FROM				VERY STRONGLY DETRACTED FROM
Enjoying the scenery	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling obligated to no one	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting away from the demands of others	( )	( )	( )	( )	( )	( )	( )	( )	( )
Teaching your outdoor skills to others.	( )	( )	( )	( )	( )	( )	( )	( )	( )
Thinking about your personal values	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having an experience to look back on	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being together with a family member(s).	( )	( )	( )	( )	( )	( )	( )	( )	( )
Doing something with the family	( )	( )	( )	( )	( )	( )	( )	( )	( )
Not being sure where you were	( )	( )	( )	( )	( )	( )	( )	( )	( )
Keeping fit and in shape	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being in a predictable situation	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having others nearby who could help if they were needed	( )	( )	( )	( )	( )	( )	( )	( )	( )
Escaping the family for awhile	( )	( )	( )	( )	( )	( )	( )	( )	( )
Taking it easy physically	( )	( )	( )	( )	( )	( )	( )	( )	( )
Comparing your equipment with that of others	( )	( )	( )	( )	( )	( )	( )	( )	( )
Seeing some new faces	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having the whole family share in an experience	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling good after being active	( )	( )	( )	( )	( )	( )	( )	( )	( )
Developing your skills and abilities	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a change from everyday routine	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being stimulated and excited	( )	( )	( )	( )	( )	( )	( )	( )	( )
Gaining a new perspective or outlook	( )	( )	( )	( )	( )	( )	( )	( )	( )
Showing others what you can do	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a chance to use your equipment	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being with your friends	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having a chance to meet new people	( )	( )	( )	( )	( )	( )	( )	( )	( )
Getting rid of tension and anxiety	( )	( )	( )	( )	( )	( )	( )	( )	( )
Gaining inspiration	( )	( )	( )	( )	( )	( )	( )	( )	( )
Experiencing the unknown	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being in a natural setting	( )	( )	( )	( )	( )	( )	( )	( )	( )
Having new experiences	( )	( )	( )	( )	( )	( )	( )	( )	( )
Finding out about new things	( )	( )	( )	( )	( )	( )	( )	( )	( )
Being alone	( )	( )	( )	( )	( )	( )	( )	( )	( )
Feeling isolated	( )	( )	( )	( )	( )	( )	( )	( )	( )

For Office Use Only

This year, we hope to be able to reach as many of those who went down the Franklin River as possible. To do this we are attempting to distribute this questionnaire to all of those begin their trip at the Collingwood Bridge. As this departure point will not always be manned, there will be some individuals who do not receive a questionnaire prior to their departure. In addition, due to the nature of the trip, many forms may be lost or misplaced. To overcome these problems, we will be sending a form through the mail to all of those who have provided us with a name and address in the registration log. In order to avoid sending you a further questionnaire, when you have completed this one, please write your name and address in the space below. To insure the anonymity and confidentiality of your replies, you may tear off the strip with your name and address and turn it and the form in separately. When we receive the strip with your name on it, we will know that you have completed the questionnaire and we will not send you a further form. This is the only purpose to which this information will be put.

Thank you.

NAME: _____

MAILING ADDRESS: _____

_____

_____

Centre for Environmental Studies

University of Tasmania

Box 252C, GPO Hobart, Tasmania, Australia 7001
Telephone: 20 2642 or 20 2643. Cables: 'Tasuni'. Telex: 58150 UNTAS

Dear Franklin River Rafter,

To assist in the planning for its future recreational use and management, the NPWS is conducting a visitor survey on the Franklin River. In order to reach as many people as possible, an effort is being made to contact all of those who raft down the Franklin.

During most of the rafting season, the Collingwood Bridge is serving as a distribution point for this survey. Forms are also being made available on board the Denison Star. Unfortunately, it is inevitable that we will miss some visitors and the nature of the trip down the Franklin is such that others may lose their forms. For this reason we have asked that all visitors include a postal address when they register. We are now comparing the registration list with the names of those who were able to complete the questionnaire.

We regret that, to the best of our knowledge, we have not received a completed form from you. In order to insure that you have an opportunity to participate in this study, we have enclosed a copy of the questionnaire with this letter. Please take a moment to complete the form and post it at your earliest convenience in the envelope provided. This will insure that your completed form comes directly to the Centre for Environmental Studies where the compilation and analysis is being carried out.

Thank you for your time and co-operation.

Sincerely,

B Carlington

Bernie Carlington